

Serviceanweisung

Service manual

SUPER TEAM 1000

Open Air 1000

Ident-Nr.: 4711300 PA SUPER TEAM (power amplifier)
4715900 PA OPEN AIR (power amplifier)
4192600 RF + CA (Radio + Cassette)
2773900 CD (CD player)



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Bestellhinweise

Hints for spare parts order

Bitte bei Ersatzteilbestellung die genaue Bezeichnung und **Ident-Nr. (siehe Typenschild)** des Gerätes sowie Bestell-Nummer und Positions-Nummer des Ersatzteils angeben.

For ordering of spare parts please state exact description and **ident no. of unit (see silver rating label on the backside of unit)** as well as part no. and position no. of required spare parts.

Benutzen Sie/Use:

Telex: 531516

oder

 * 317298 #

oder

Telefax: 08245/51326

Betriebsspannungen

Operating voltage

Spannung/Voltage (Volt)	Verbraucher	Consuming P.C.B.
U 1 +60	Endstufe	Output amplifier
U 2 -60	Endstufe	Output amplifier
U 3 +5 V	Standby	Standby
U 4 +13,4 V	Tuner Lichtorgel, Klangregler	Tuner flashlights, tone control
U 5 -13,4 V	Lichtorgel, Klangregler	flashlights, tone control

Verdrahtungstabelle

Stecker	von	nach	Bemerkungen
B	HF-Platine	↔ Bedienteil Tuner	Anschluß für Tastatur
C	HF-Platine	↔ Klangregler-Platine	NF-Verbindung
D	HF-Platine	↔ Ferritantenne	Anschluß für Ferritantenne
F	HF-Platine	↔ Klangregler-Platine	Spannungsversorgung Tuner
G	HF-Platine	↔ Klangregler-Platine	FB Tuner
H	Klangregler-Platine	↔ Quellenumschaltung	Anschluß Tastatur
I	Klangregler-Platine	↔ Plattenspieler	NF-Phono
J	Klangregler-Platine	↔ Plattenspieler	+UB Phono
K	Klangregler-Platine	↔ Cassette	+UB Cassette
L	Klangregler-Platine	↔ Cassette	NF-Cassette
M	Klangregler-Platine	↔ Netzschalter-Platine	Spannungsversorgung/Standby
N	Bedienteil Lichtorgel (Filter)	↔ Netzversorgung Lichtorgel-Platine	Ansteuerung für Optokoppler
P	Klangregler-Platine	↔ Lautstärkepoti	Motor
Q	Klangregler-Platine	↔ Lautstärkepoti	NF Out
R	Klangregler-Platine	↔ Lautstärkepoti	NF In
S	Netzschalter-Platine	↔ CD-Spieler	Netz Eingang
T	Netzschalter-Platine	↔ Netzversorgung Lichtorgel	Netz für CD
U	Netzschalter-Platine	↔ Trafo	Netz für Lichtorgel
V	Netzschalter-Platine	↔ Netzschalter-Platine	Netz für Trafo
W	Trafo	↔ Netzschalter-Platine	Spannungsversorgung $\pm 13,4$ V
X	Trafo	↔ Endstufe	Spannungsversorgung \pm Endstufe
Y	Netzschalter-Platine	↔ Lautsprecherbuchsen-Platine	Kopfhörer Relaisansteuerung
Z	Netzschalter-Platine	↔ Poweranzeige	Ansteuerung Bestriebsspannung $+$ $-$
AC	Netzschalter-Platine	↔ Bedienteil Lichtorgel	Spannungsvers. $\pm 13,4$ V
AD	Endstufe	↔ Lautsprecherbuchsen-Platine	NF-Ausgang
AE	Endstufe	↔ Lautsprecherbuchsen-Platine	NF-Eingang
AF	Lautsprecherbuchsen-Platine	↔ Bedienteil Lichtorgel	NF-Lichtorgel

Wiring table

Pin	from	to	Notice
B	RF P.C.B.	↔ Control unit tuner	Connection for buttons
C	RF P.C.B.	↔ Tone control P.C.B.	AF connection
D	RF P.C.B.	↔ Wavemagnet	Connection for wavemagnet
F	RF P.C.B.	↔ Tone control P.C.B.	Power supply tuner
G	RF P.C.B.	↔ Tone control P.C.B.	Remote control tuner
H	Tone control P.C.B.	↔ Mode selection	Connections for buttons
I	Tone control P.C.B.	↔ Phono	AF phono
J	Tone control P.C.B.	↔ Phono	Power supply phono
K	Tone control P.C.B.	↔ Cassette	Power supply cassette
L	Tone control P.C.B.	↔ Cassette	AF cassette
M	Tone control P.C.B.	↔ Power switch P.C.B.	Power supply/Standby
N	Control unit flashlights	↔ Power supply flashlights	Control for optocoupler
P	Tone control P.C.B.	↔ Volume poti	Motor
Q	Tone control P.C.B.	↔ Volume poti	AF out
R	Tone control P.C.B.	↔ Volume poti	AF in
S	Power switch P.C.B.	↔	Power input
T	Power switch P.C.B.	↔ CD player	Power supply CD player
U	Power switch P.C.B.	↔ Power supply flashlights	Power supply flashlights
V	Power switch P.C.B.	↔ Power transformer	Power supply transformer
W	Power transformer	↔ Power switch P.C.B.	$\pm 13,4$ V
X	Power transformer	↔ Output amplifier	Power supply output amplifier \pm
Y	Power switch P.C.B.	↔ Speaker connection P.C.B.	Headphone relays control
Z	Power switch P.C.B.	↔ Power indication P.C.B.	Power supply \pm
AC	Power switch P.C.B.	↔ Control unit flashlights	Power supply $\pm 13,4$ V
AD	Output amplifier	↔ Speaker connection P.C.B.	AF output
AE	Output amplifier	↔ Speaker connection P.C.B.	AF input
AF	Speaker connection P.C.B.	↔ Control unit flashlights	AF flashlights

Abgleichanweisung Tuner

a) FM-ZF-Abgleich

- Wobbelgenerator an Antennenbuchse anschließen.
- Sichtgerät über HF-Tastknopf an Pin 1 IC LA 1265 (ZF-IC) anschließen.
- Prüfling auf 98 MHz einstellen.
- Durchlaßkurve mit ZF-Filter (im Tuner) auf Symmetrie und Maximum abgleichen.

b) Quadraturabgleich

- Mit Meßsender 98 MHz, 1 mV, 40 kHz Hub über Antenne einspeisen.
- Mit L 201 NF-Maximum einstellen.
- Mit L 202 Klirrfaktor Minimum einstellen.
- Abgleich wiederholen, bis DC-Spannung über CR 211 (47 K) gleich 0 V ist.
- Dabei NF-Ausgangsspannung (ST.C) ca. 450 mV.

c) Decoder-Abgleich

- Pin 4 + 8 IC 301 über 10 kOhm miteinander verbinden.
- Pin 10 IC 201 (ZF IC) über 100 nF mit Masse verbinden.
- Frequenz-Zähler an Pin 4 (IC 301) anschließen.
- Mit R 308 76 kHz ± 1 kHz einstellen.
- Meßaufbau rückgängig machen.

d) Stereo-Übersprechen

- NF-Millivoltmeter an NF-Ausgang (Stecker C) anschließen.
- Stereo-Multiplex-Signal über Antenne einspeisen.
- Mit R 301 Übersprechen auf Minimum einstellen.

e) 19/38 kHz Filter

- Multiplex-Signal mit 1 mV HF-Pegel unmoduliert einspeisen.
- Mit Filter 301/302 max. Sperrtiefe einstellen.

Abstimmspannung MW

Meßvorbereitung: Multimeter an Kathode von D 601 und Masse anschließen.

- MW-Bereichstaste drücken.
- Gerät auf 513 kHz einstellen.
- L 401 0,5 Volt einstellen.
- Gerät auf 1620 kHz einstellen.
- Mit C 408 8 Volt einstellen.
- Abgleich nochmals wiederholen.

Abstimmung LW

Meßvorbereitung: siehe oben

- LW-Bereichstaste drücken.
- Gerät auf 137 kHz einstellen.
- Mit L 402 0,6 Volt einstellen.
- Gerät auf 290 kHz einstellen.
- Mit C 405 7 Volt einstellen.
- Abgleich nochmals wiederholen.

Alignment procedure tuner

a) FM-IF calibration

- Connect sweep frequency generator to antennae jack.
- Connect VDU above HF pushbutton to pin 1 IC LA 1265 (IF-IC).
- Set equipment under test to 98 MHz.
- Calibrate transmission characteristic to "Symmetry" and "Maximum" with IF filter (in tuner).

b) Quadrature calibration

- Supply 98 MHz, 1 mV, 40 kHz deviation with signal generator via antennae.
- Set AF maximum with L 201.
- Set harmonic distortion factor minimum with L 202.
- Repeat calibration until DC voltage via CR 211 (47 K) is equal to 0 V.
- AF output voltage (plug C) is approx. 450 mV.

c) Decoder calibration

- Connect pins 4 + 8 IC 301 with 10 kOhm.
- Connect pin 10 IC 201 (IF-IC) to earth with 100 nF.
- Connect frequency counter to pin 4 (IC 301).
- Set 76 kHz ± 1 kHz with R 308.
- Reverse measuring set-up.

d) Stereo crosstalk

- Connect AF millivolt meter to AF output (plug C).
- Supply stereo multiplex signal via antennae.
- Set crosstalk to minimum with R 301.

e) 19/38 kHz filter

- Supply unmodulated multiplex signal with 1 mV HF level.
- Set max. rejection range with filter 301/302.

MW tuning voltage

Measuring preparation: Connect multimeter to cathode of D 601 and to earth.

- Press MW band button.
- Set unit to 513 kHz.
- Set 0.5 volts with L 401.
- Set unit to 1620 kHz.
- Set 8 volts with C 408.
- Repeat calibration.

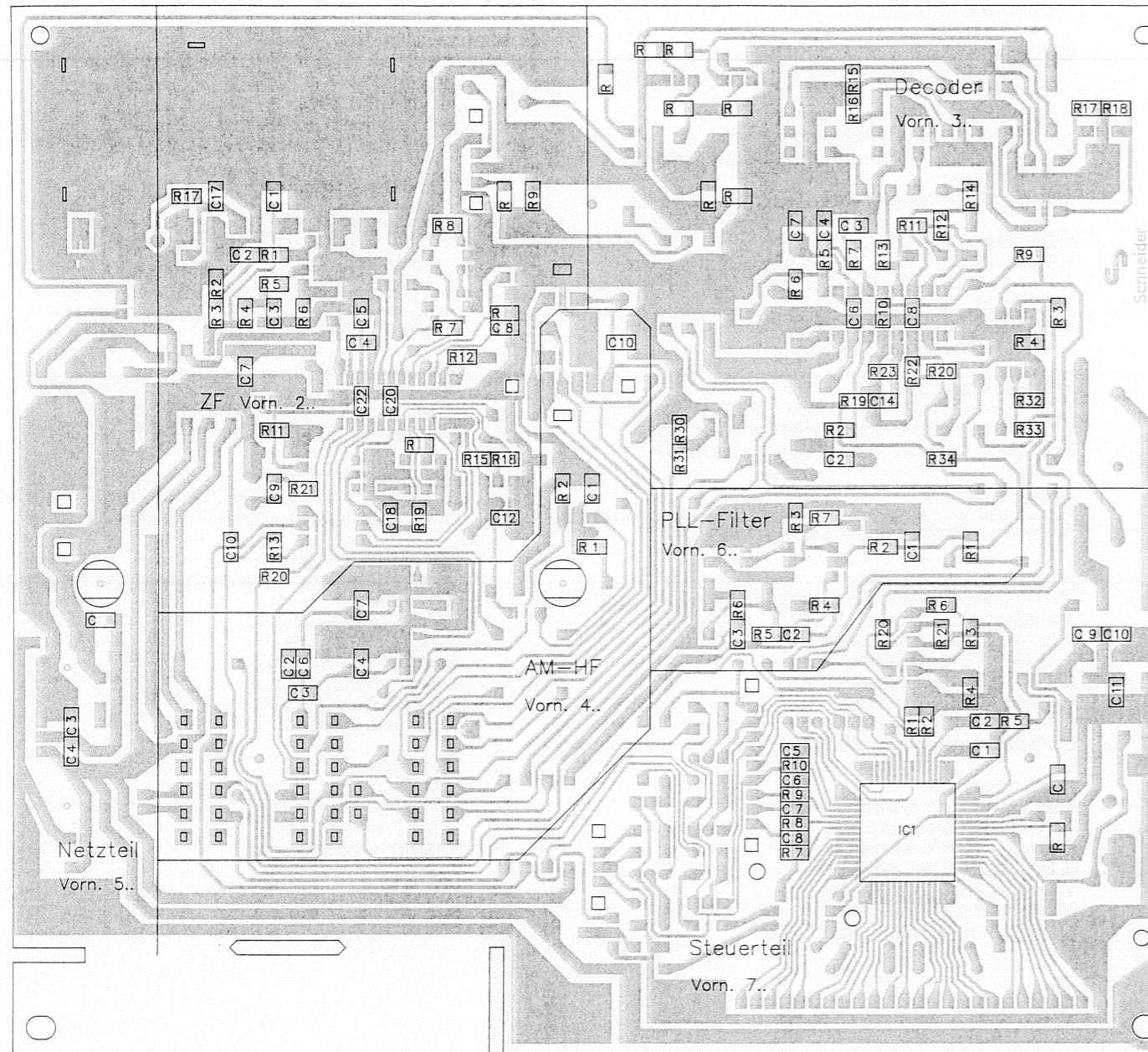
LW tuning

Measuring preparation: See above.

- Press LW band button.
- Set unit to 137 kHz.
- Set 0.6 volts with L 402.
- Set unit to 290 kHz.
- Set 7 volts with C 405.
- Repeat calibration.

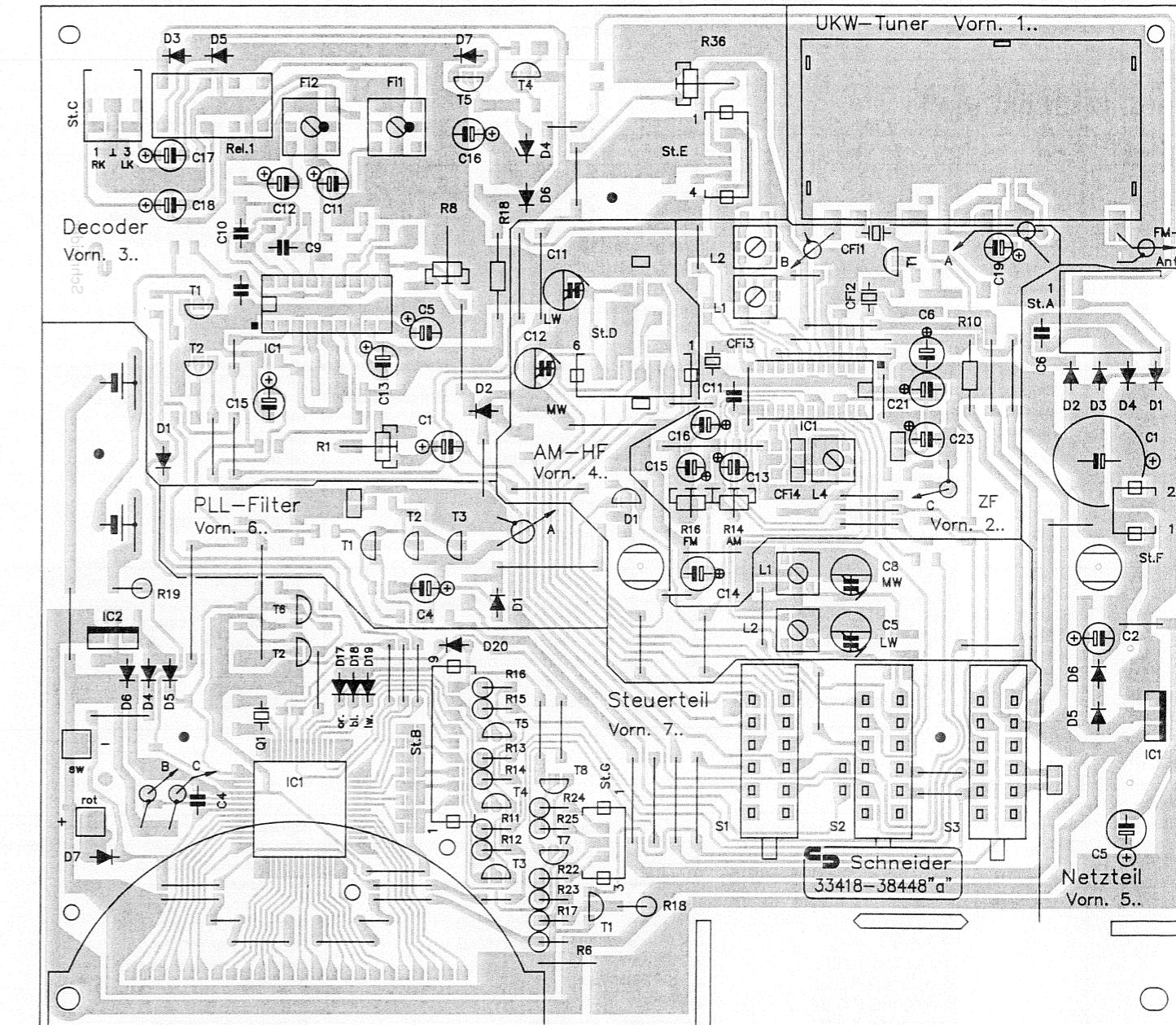
Platinendarstellung HF
P.C.B. diagram RF

Leiterbahnseite
Bottom view



Bedienteil Tuner
Control unit tuner

Bestückungsseite
Top view

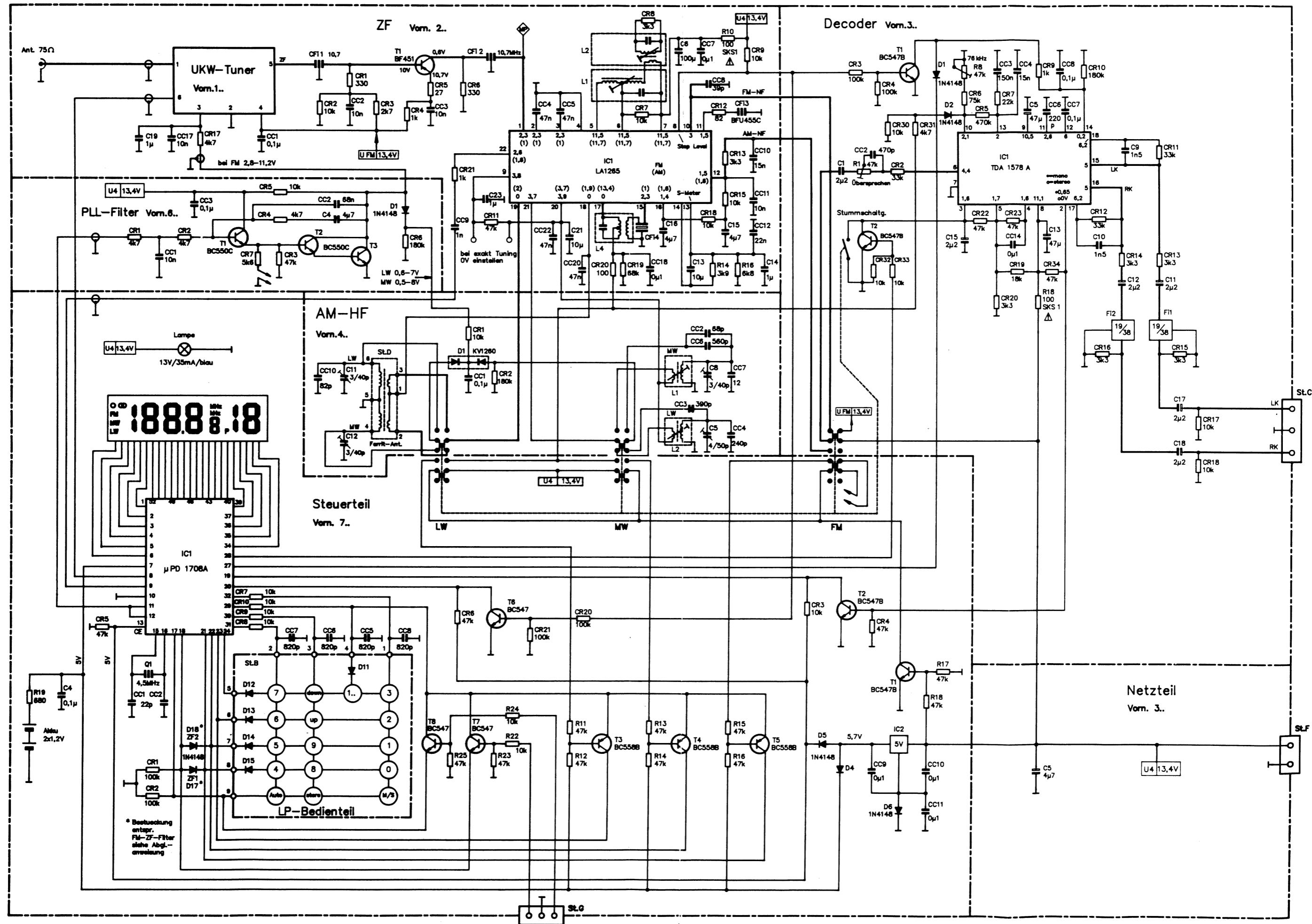


Schaltbild HF
Circuit diagram RF

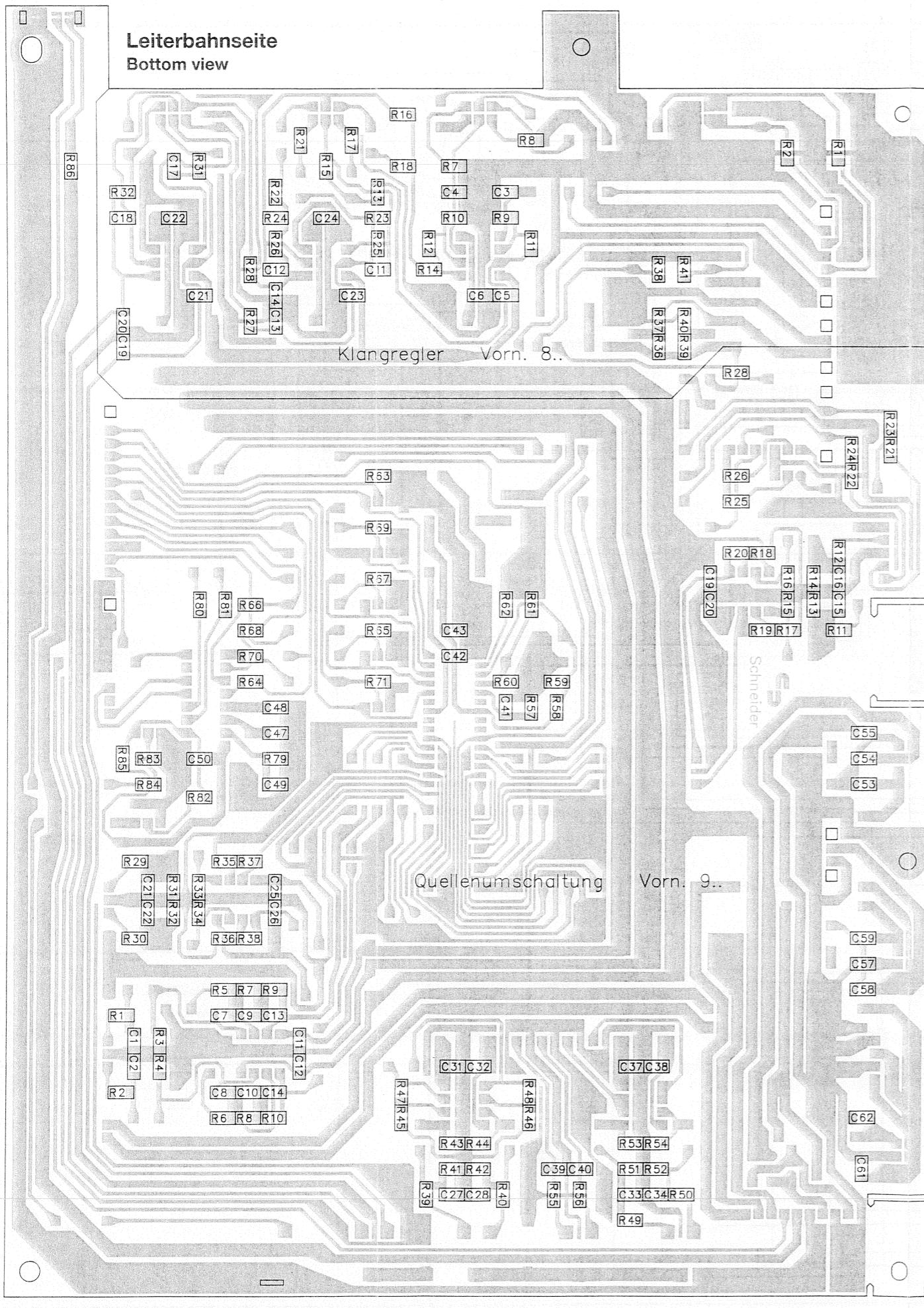
Gerät in Stellung "FM" ein!

⚠ = Sicherheitsbauteile
sind unbedingt durch
Originalteile zu ersetzen

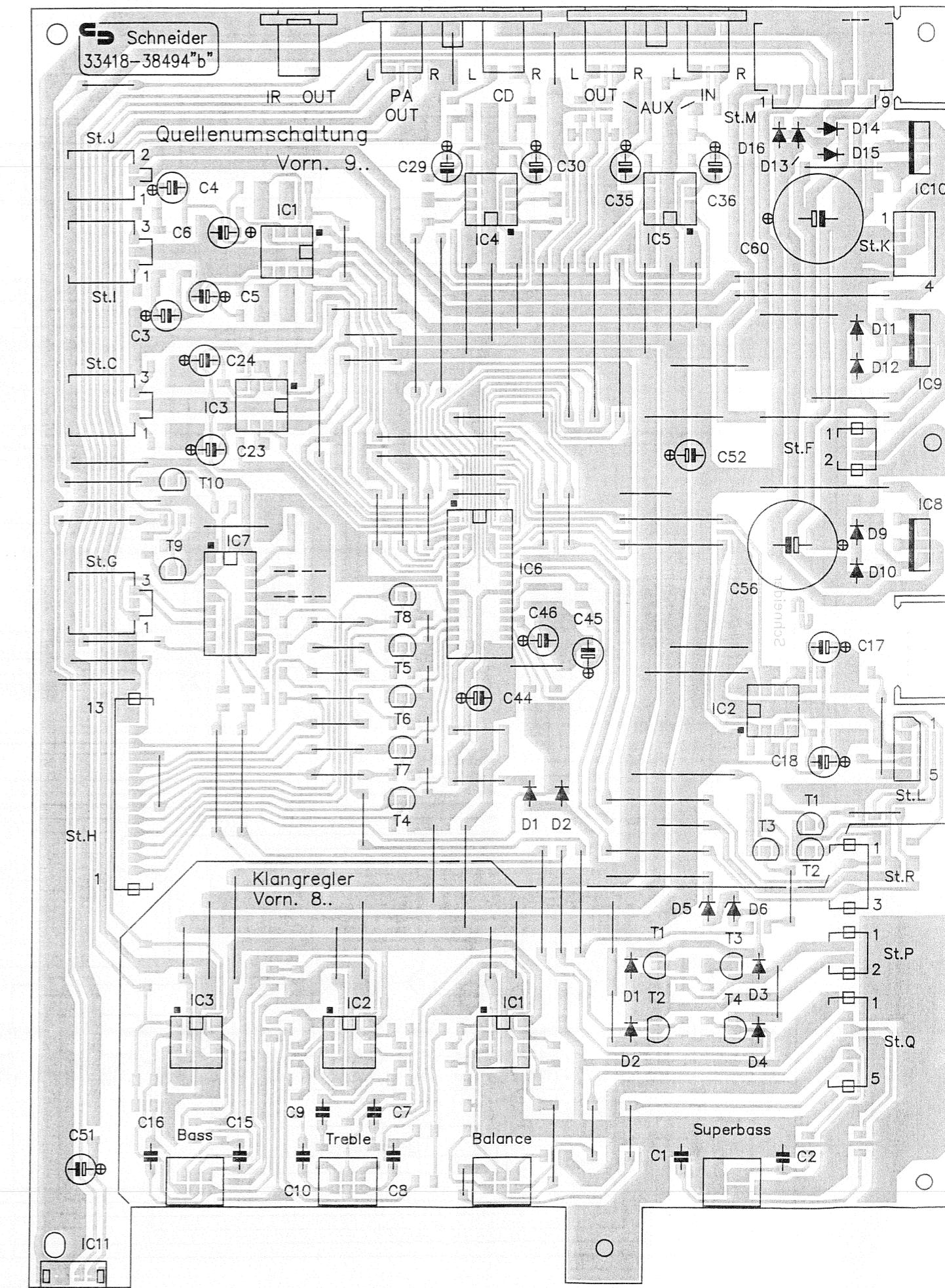
⚠ = Please use
original spare
parts only



Platinendarstellung Klangregler P.C.B. diagram tone control

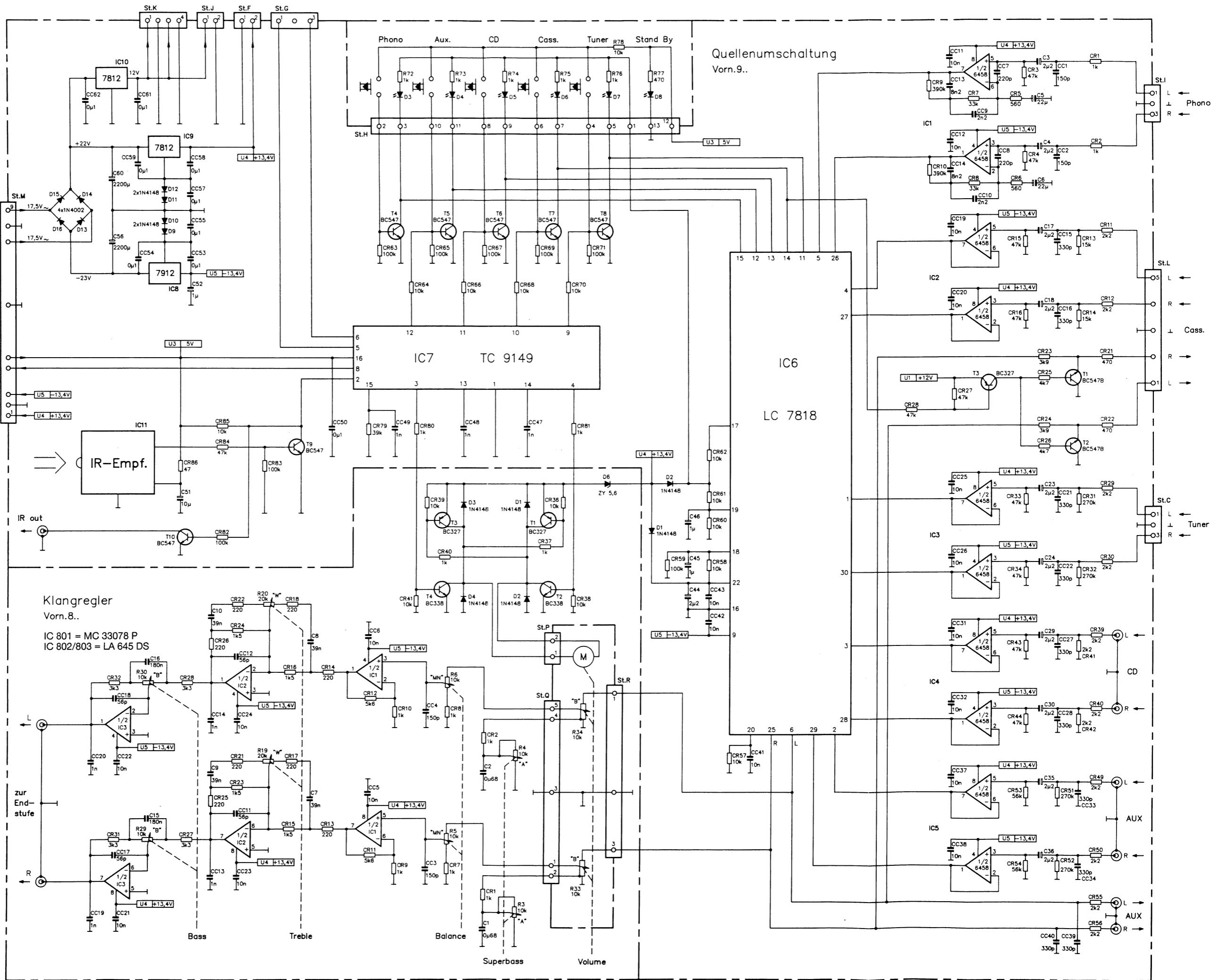
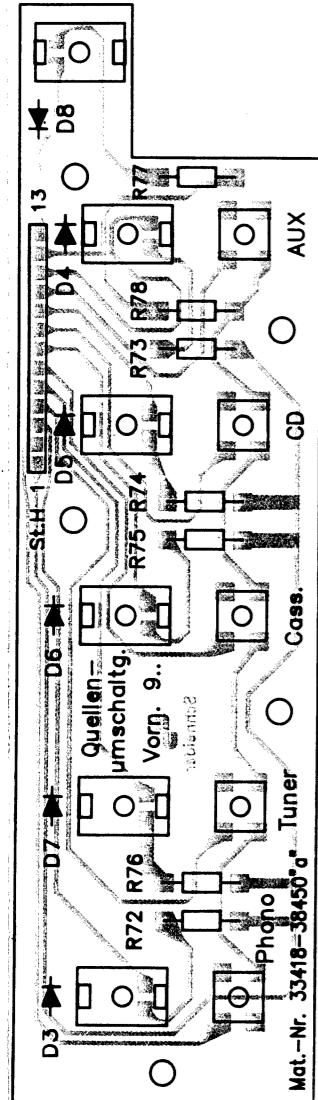


Bestückungsseite

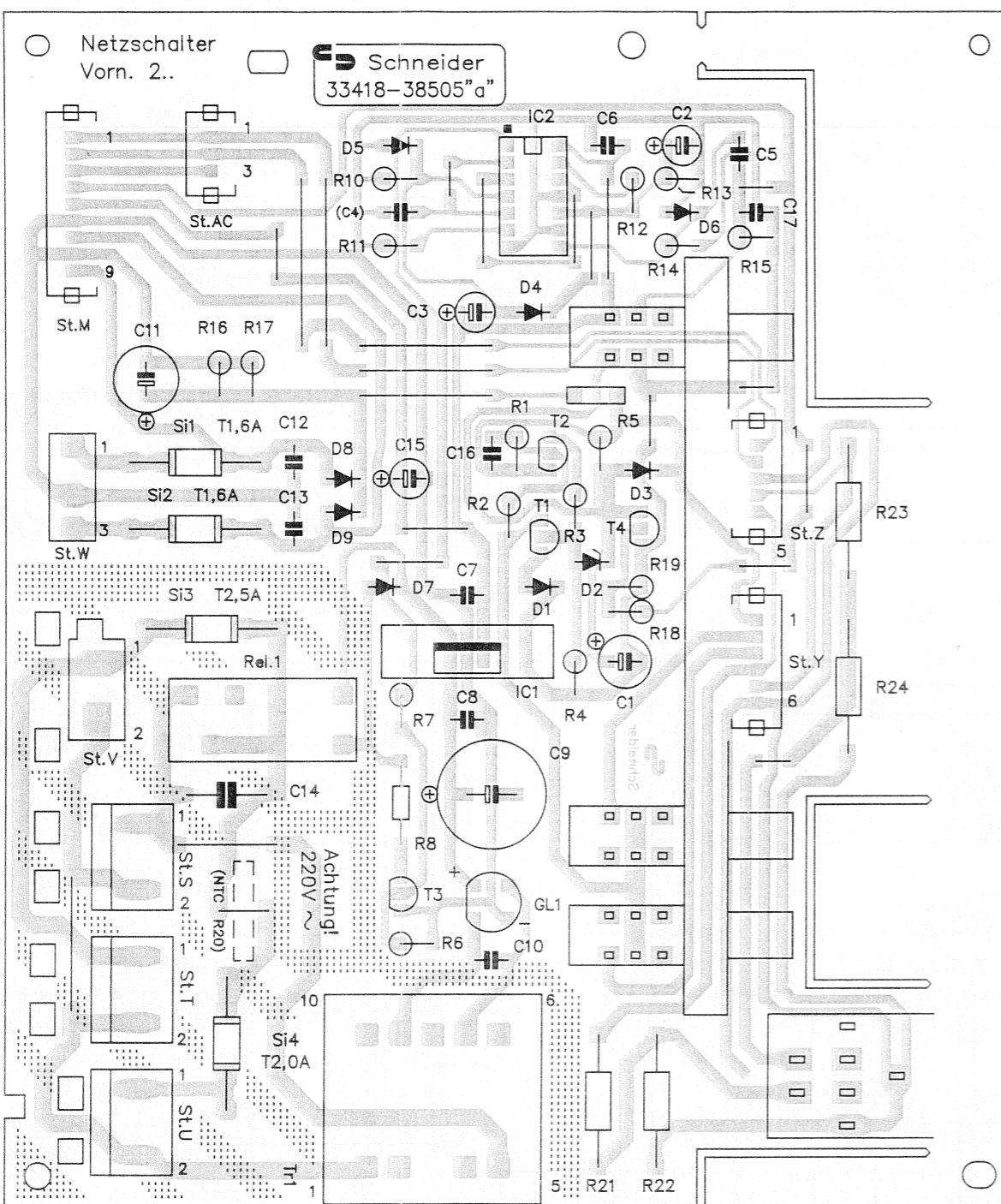


Schaltbild Quellen- umschaltung, Klangregler Circuit diagram mode selection, tone control

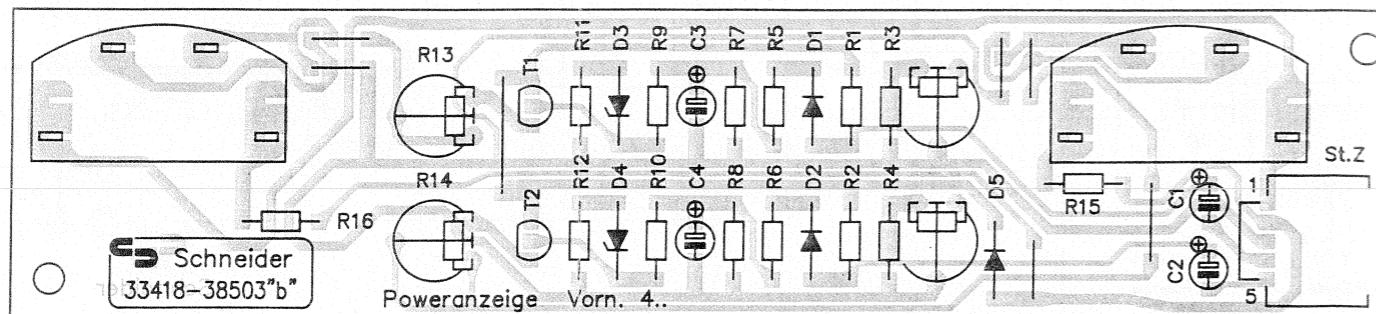
Platinen- darstellung Quellenumschaltung P.C.B. diagram mode selection



Platinendarstellungen NF P.C.B. diagrams AF

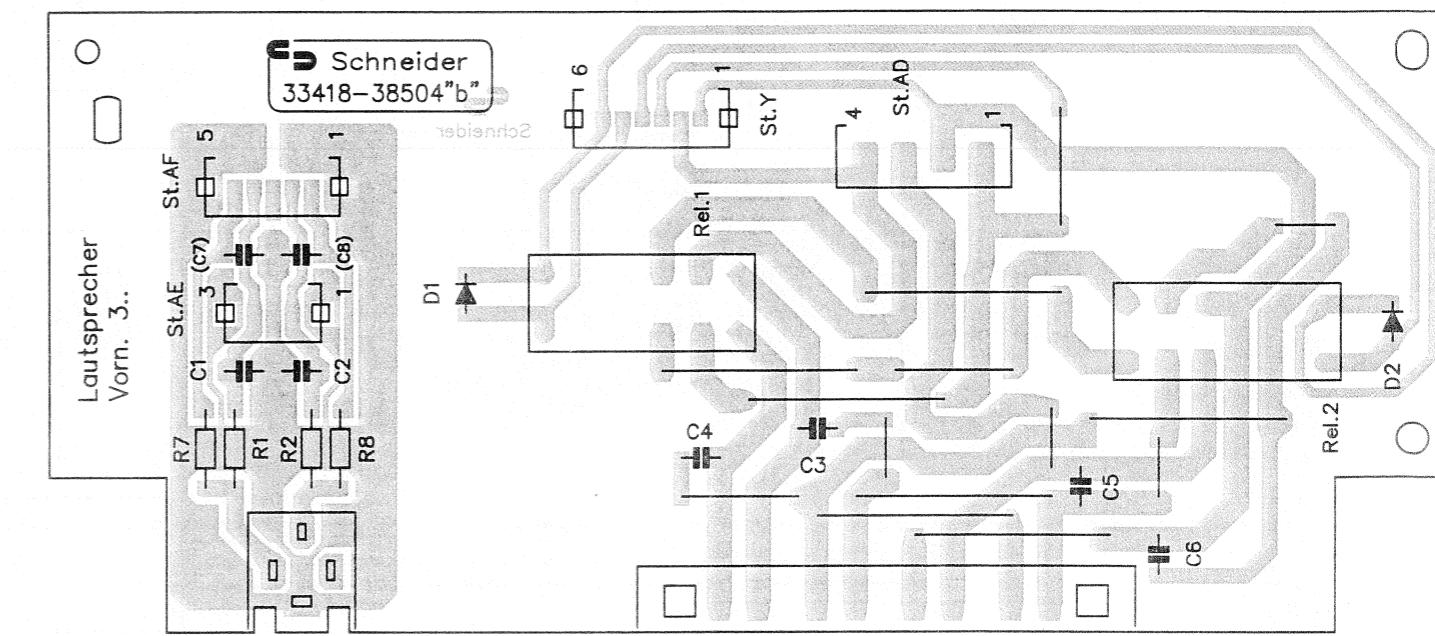


Power-Anzeige

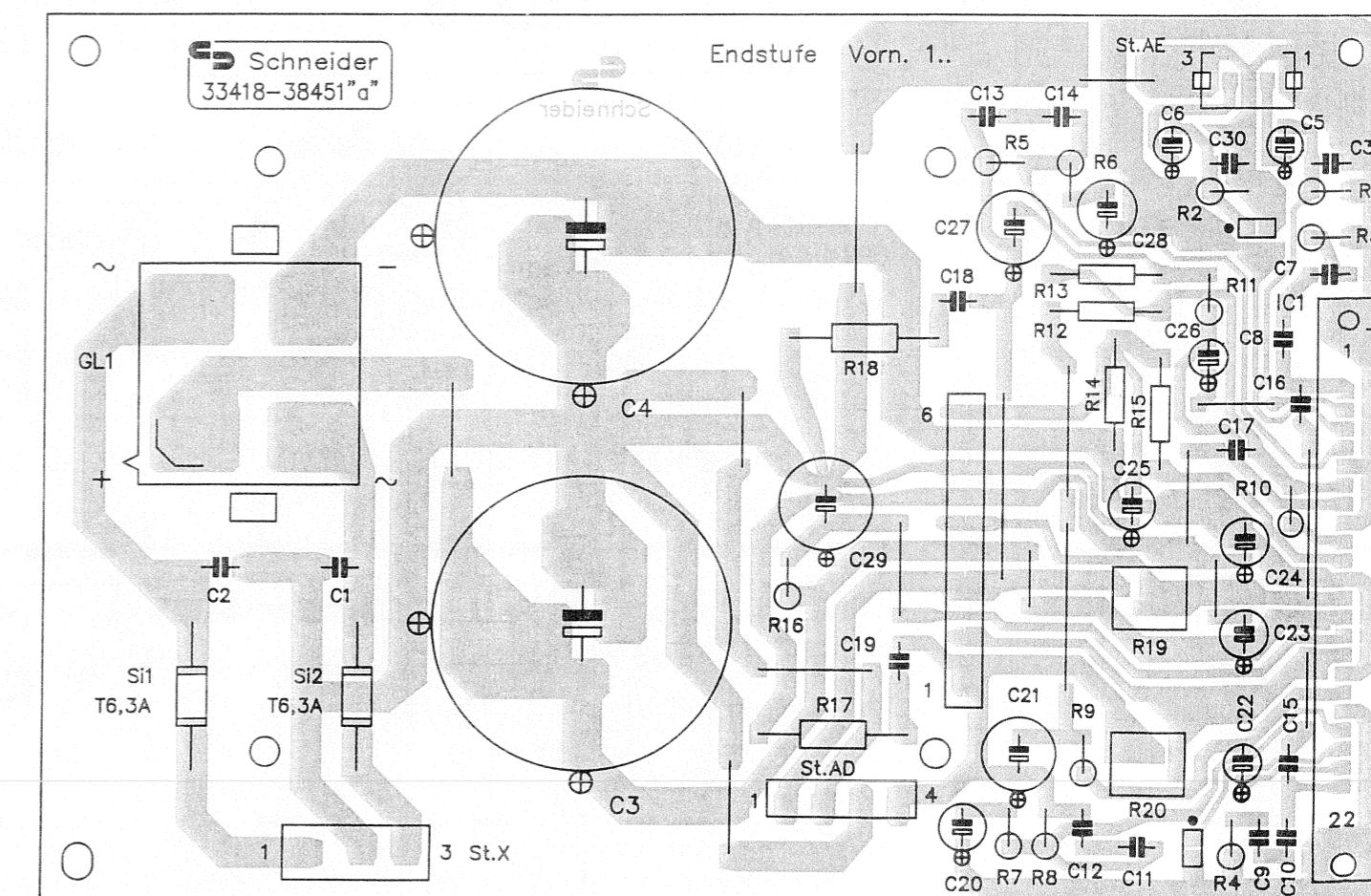


Netzschalterplatine Power switch P.C.B.

Lautsprecherbuchsenplatine Speaker connection P.C.B.

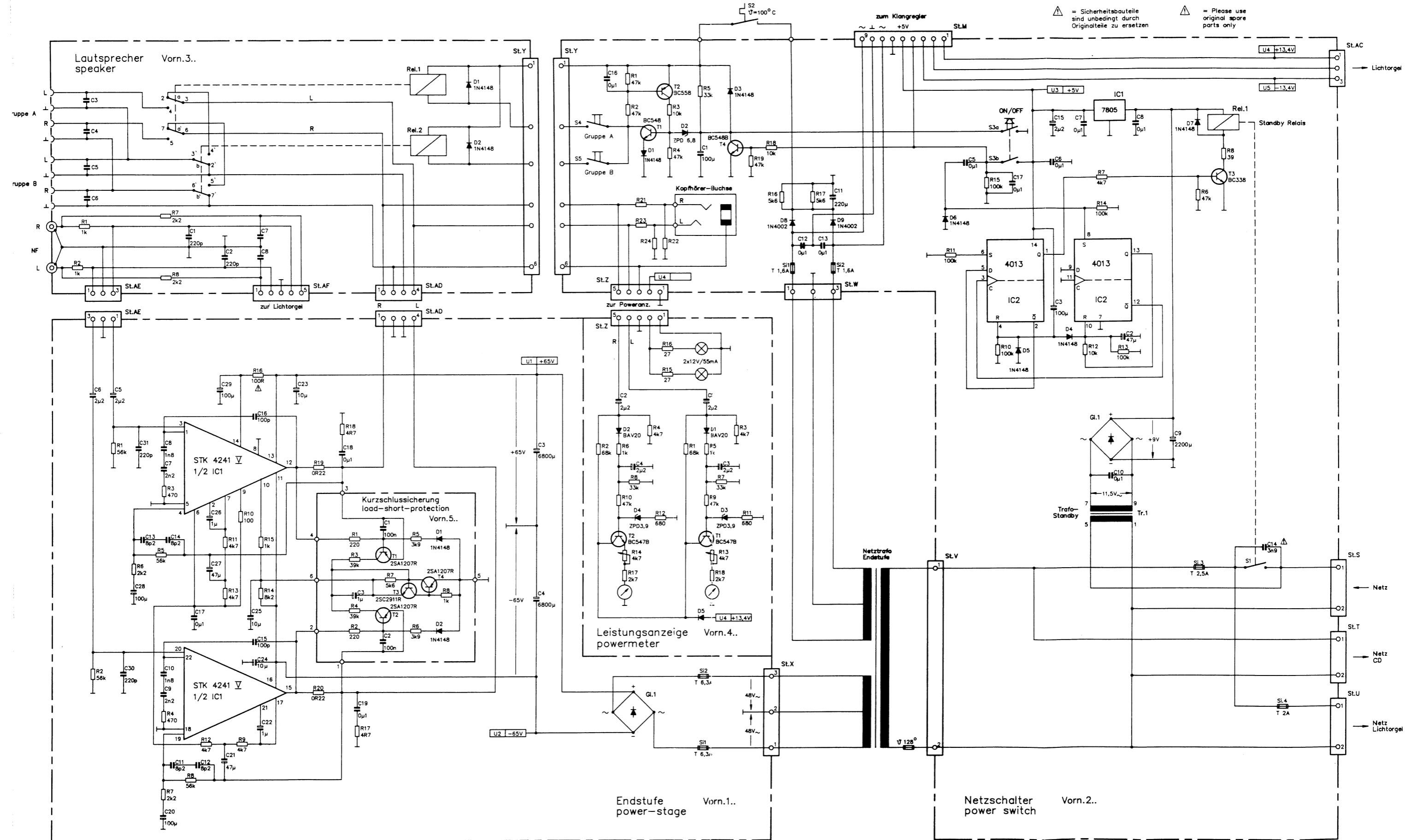


Endstufe Output amplifier



Schaltbild NF

Circuit diagram AF

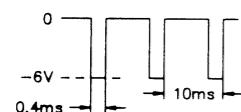


Schaltbild Lichtorgel Circuit diagram flashlights

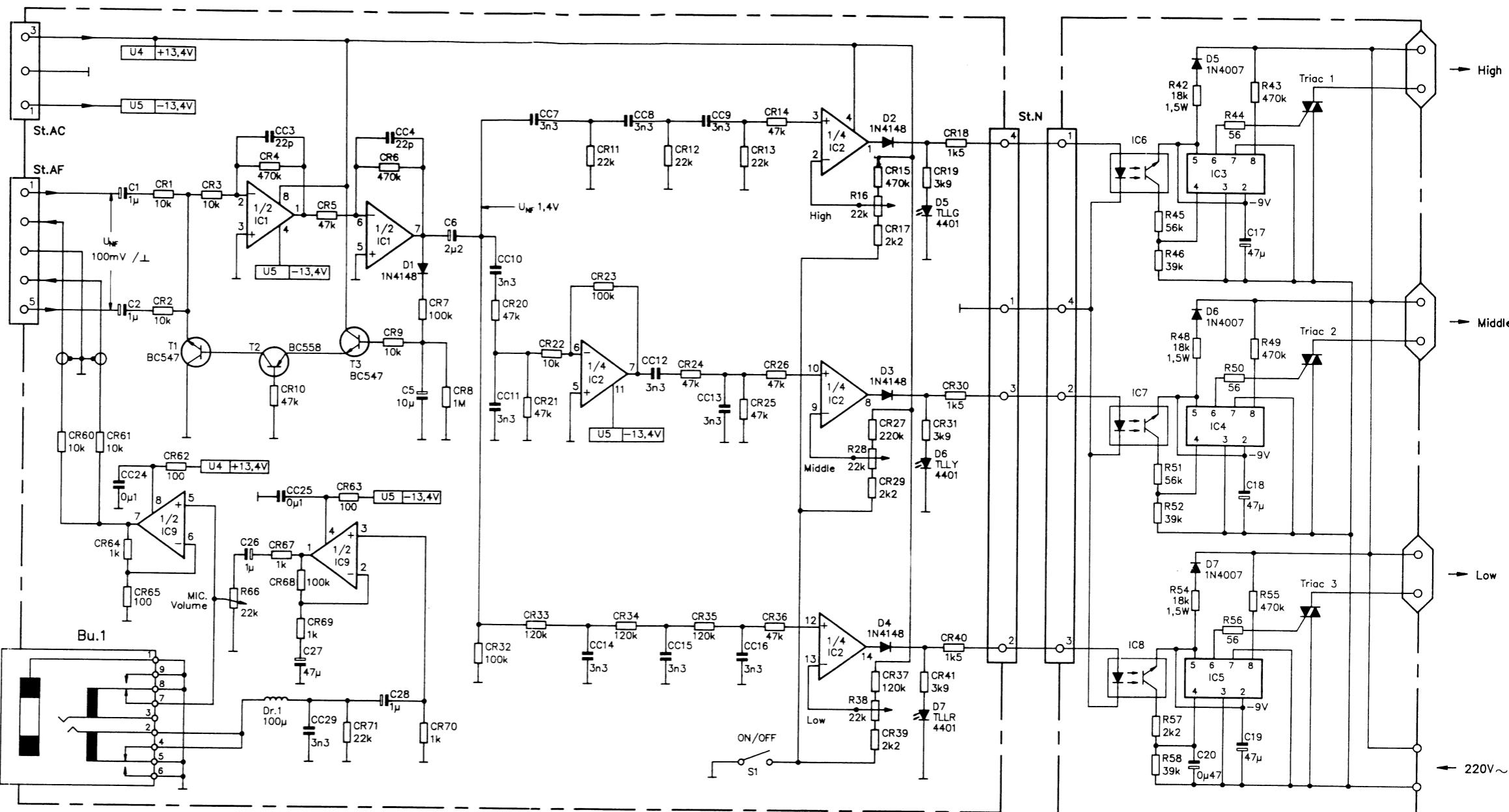
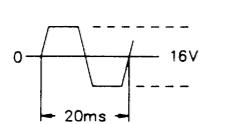
(nur für OPEN AIR)
(only OPEN AIR)

IC 1, IC 9= 6458 DS
IC 2= MC 33079
IC 3, IC 4, IC 5= U 217 B
IC 6, IC 7, IC 8= CQY 80 NG
Triac 1, 2, 3= TIC 206 M

Lampe aktiv Pin 6 IC 3,4,5



Pin 8 IC 3,4,5

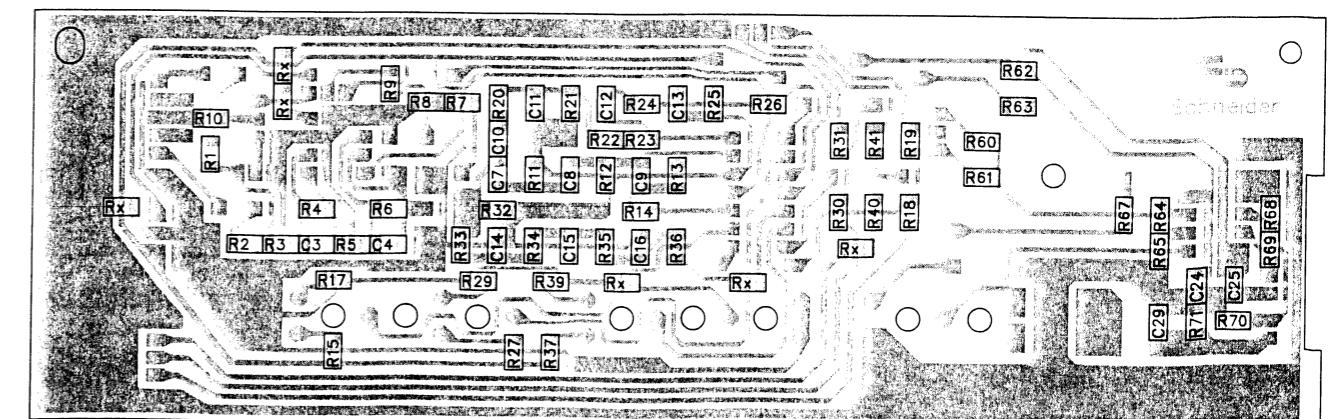
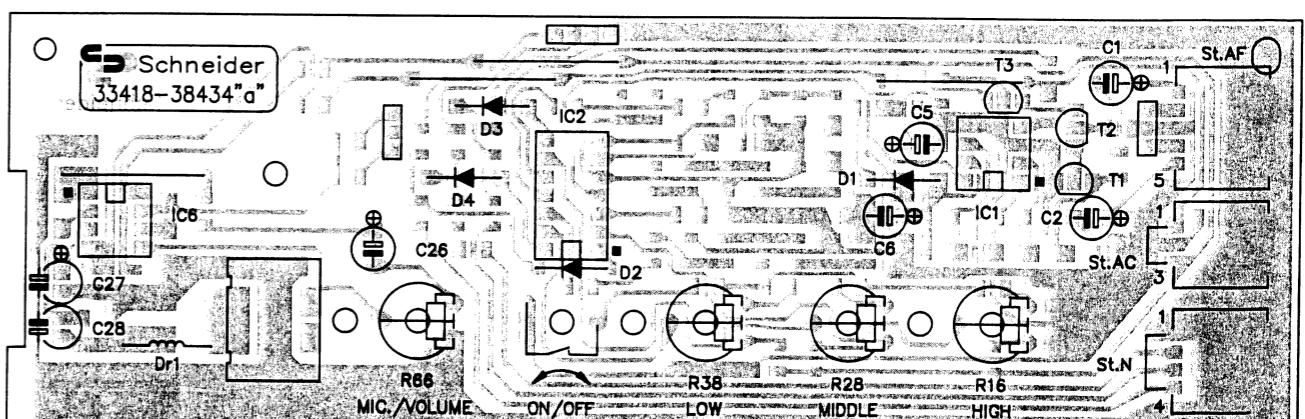
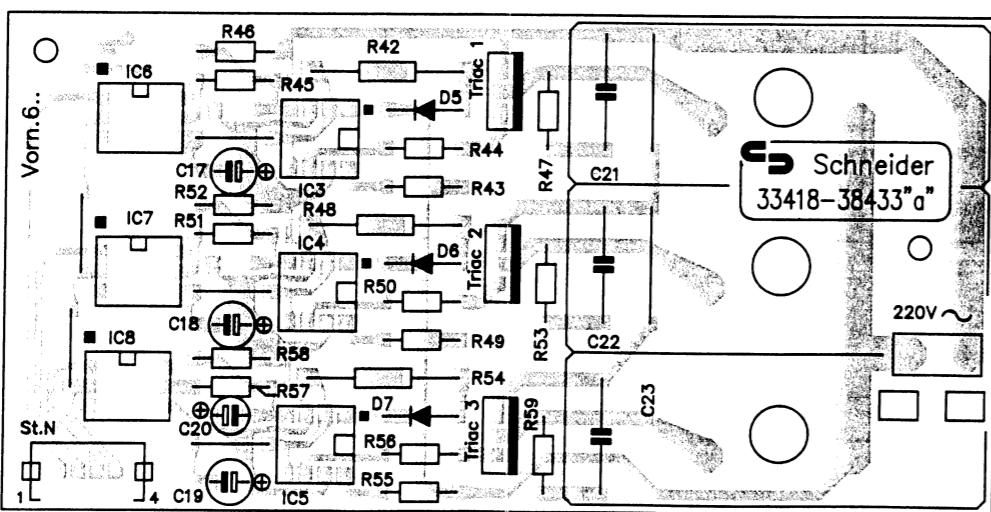


Platinendarstellung Lichtorgel P.C.B. diagram flashlights

Bedienteil (Filter) Control unit (filter)

Netzversorgung

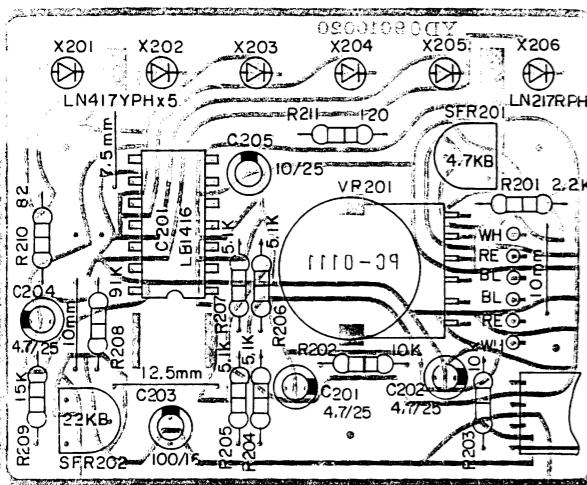
Power supply



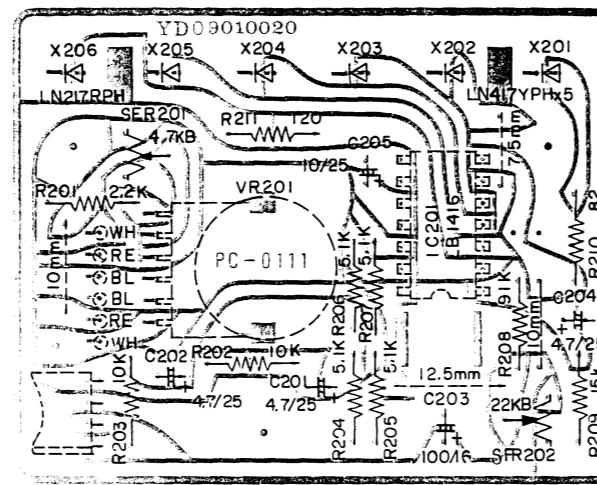
Platinendarstellungen Cassettenrecorder P.C.B. diagrams cassette recorder

Aussteuerungsplatine Record level P.C.B.

Bestückungsseite/Top view

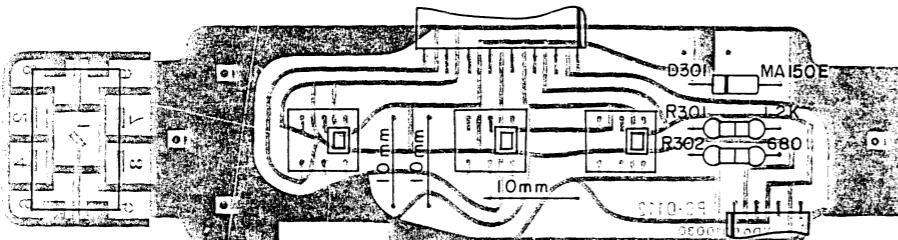


Leiterbahnseite/Bottom view

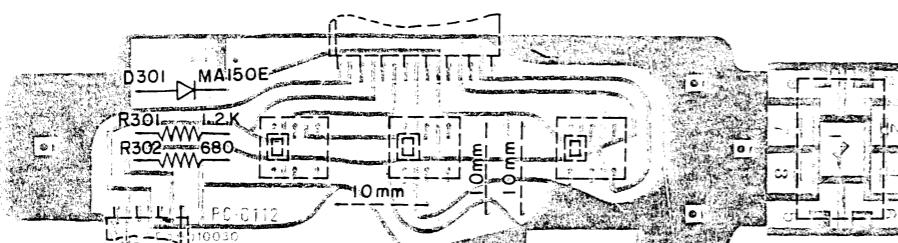


Schalterplatine Switch P.C.B.

Bestückungsseite/Top view



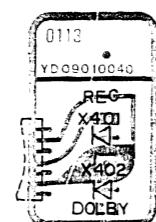
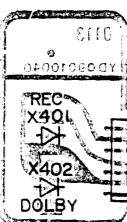
Leiterbahnseite/Bottom view



LED-Platine LED P.C.B.

Bestückungsseite/Top view

Leiterbahnseite/Bottom view



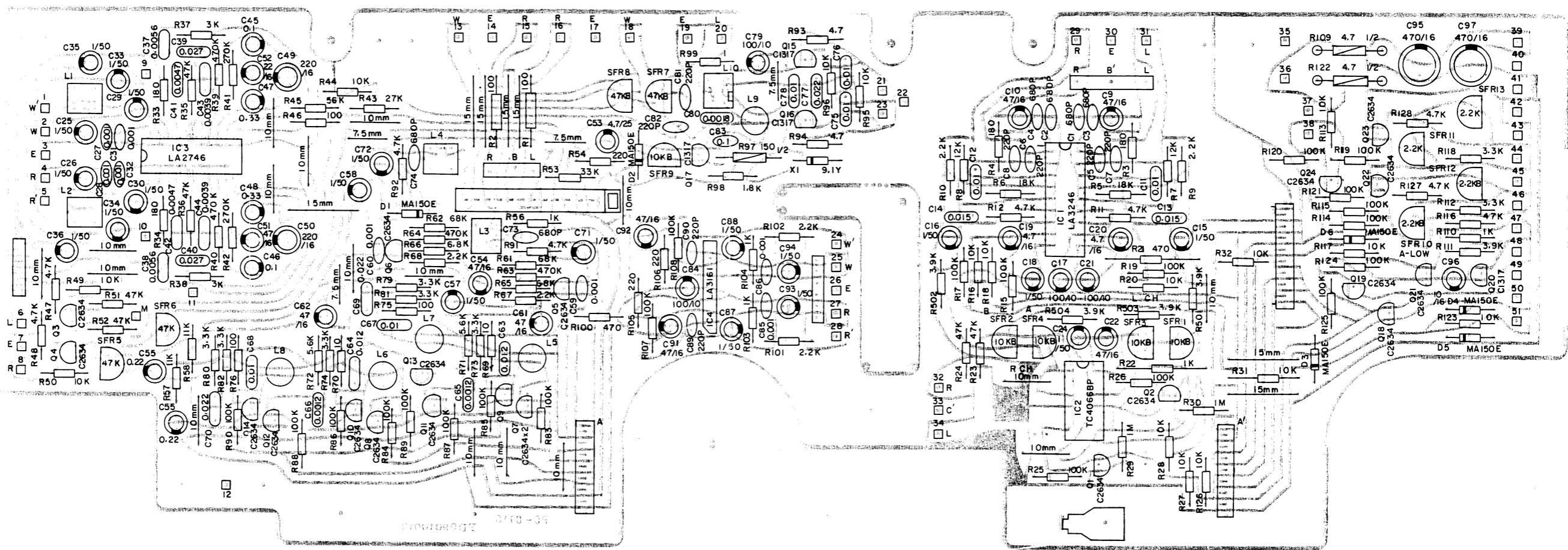
Abgleichanweisung Cassettenrecorder

STEP	INPUT SOURCE		TEST TAPE	OUTPUT INDICATOR	ADJUSTOR	ADJUSTOR	NOTE				
	GENERATOR										
	CONNECTION	FREQUENCY		CONNECTION							
HEAD AZIMUTH											
1.			MTT-114N	V.T.V.M.	AZIMUTH	MAX	TAPE A &				
				LINE INPUT	SCREW		TAPE B				
TAPE SPEED											
2.	PLAY BACK		MTT-111N	V.T.V.M.	SFR-10	3000Hz	TAPE A				
		3000Hz		LINE OUTPUT	SFR-11		TAPE B				
	PLAY BACK		MTT-111N	V.T.V.M.	SFR-12	4800Hz	TAPE A				
		3000Hz		LINE OUTPUT	SFR-13		TAPE B				
DOLBY LEVEL											
3.	PLAY BACK		MTT-150	V.T.V.M.	SFR-3	580mV	TAPE A				
		400Hz		DOLBY IC 4.21PIN	SFR-2		TAPE B				
TAPE OSC COIL FREQUENCY											
4.	RECORD										
				E HEAD	L-10	125KHz					
TRAP COIL											
5.	RECORD			V.T.V.M.	L-3	MIN					
				R-91/R-92	L-4						
HEAD BIAS LEVEL											
6.	RECORD			V.T.V.M.	SFR-9	55mV	NOR				
				R/P HEAD	SFR-7	76mV	CRO2				
DOLBY TRAP COIL											
7.	RECORD			V.T.V.M.	L-1	MIN					
				DOLBY IC-4.21PIN	L-2						
LEVEL METER											
8.	RECORD			V.T.V.M.		4RCS					
	LINE IN	1K 400mV		DOLBY IC4.21	SFR-202	LAMP ON					
RECORDING SENSITIVITY											
9.	RECORD			V.T.V.M.	SFR-5	5.0mV	NOR				
	LINE IN	1K 400mV		R/P HEAD	SFR-6	8.2mV	CRO2				

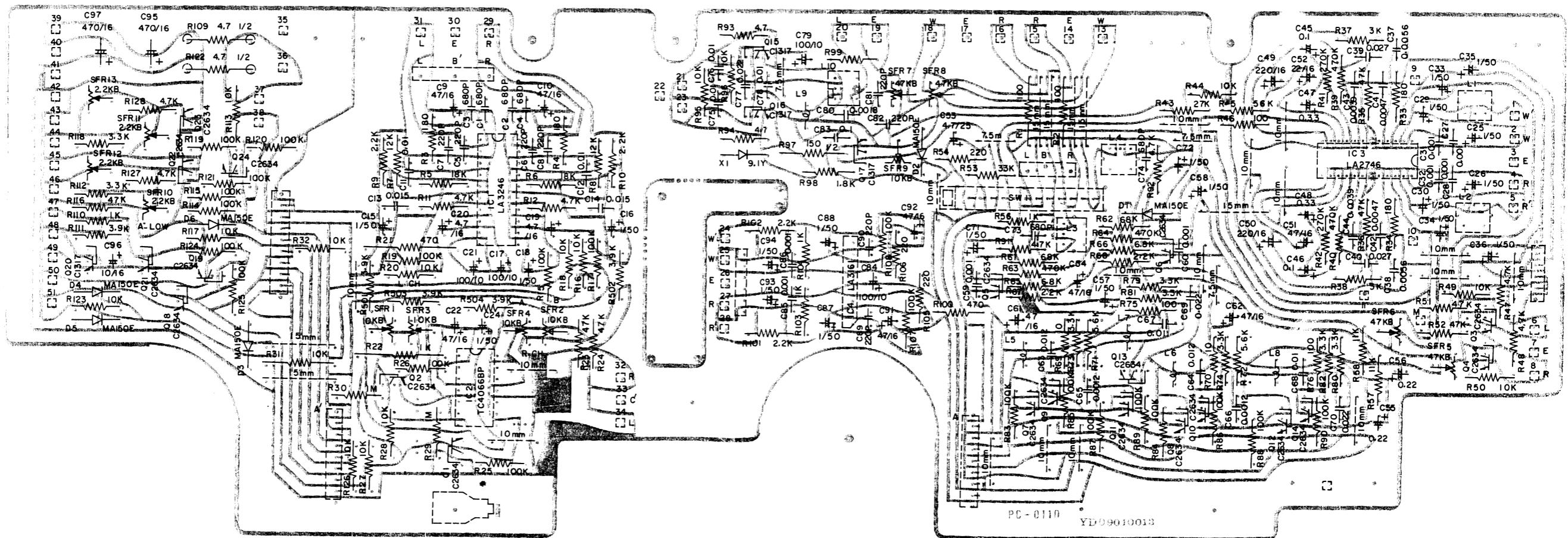
Grundplatine Cassettenrecorder

Main P.C.B. cassette recorder

Bestückungsseite/Top view

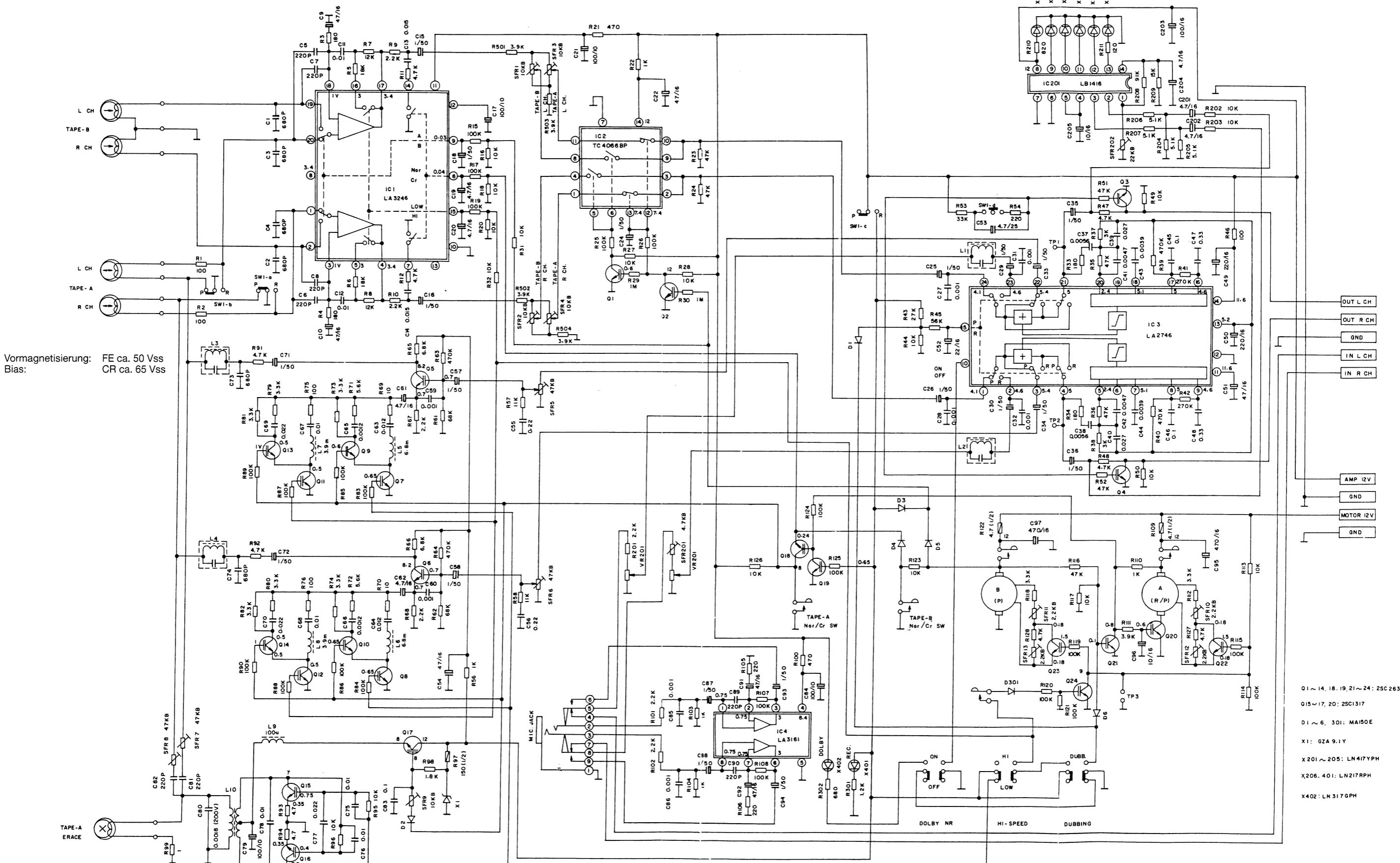


Leiterbahnseite/Bottom view



Schaltbild Cassettenrecorder

Circuit diagram cassette recorder



Vormagnetisierung: FE ca. 50 Vss
Bias: CR ca. 65 Vss

Löschspannung:
Erase voltage:
FE ca. 155 Vss
CR ca. 140 Vss

	Q1	Q2	Q5	Q6	Q7	Q8	Q9	Q10	Q12	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	
B	0.6	0	0.7	0.7	0.65	0.65	0.65	0.65	0	1	0.75	0.4	8	0	0.65	0.6	0.1	1.5	1.5	0	
C	0	1.2	5.2	8.2	0	0	0	0	0	0	0.5	7	7.2	12	8	0.24	0	0.8	0.18	0.18	9
E	0	0	0.7	0.7	0	0	0	0	0	0.5	0.35	0.35	8	0.24	0	0	0.18	0.18	0	0	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC1	0	0	1	3.4	3	0.04	0	3.4	0.03	0	11.5	0	0	0	3	3.4	1	0	0	0	0	0	0	
IC2	0	0	0	0	0	0	0	0	0	0	0	7.4	7.4	12	12	0	0	0	0	0	0	0	0	
IC3	4.1	4.6	5.4	5	2.4	0	5.1	5	4.6	0	11.6	0	5.2	11.6	0	4.6	5	5.1	0	2.4	5	5.4	4.6	4.1
IC4	0.75	0.75	3	8.4	0	3	0.75	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IC201																								

Q1 ~ 14, 18, 19, 21 ~ 24: 2SC2634

Q15 ~ 17, 20: 2SC1317

Q1 ~ 6, 301: MA150E

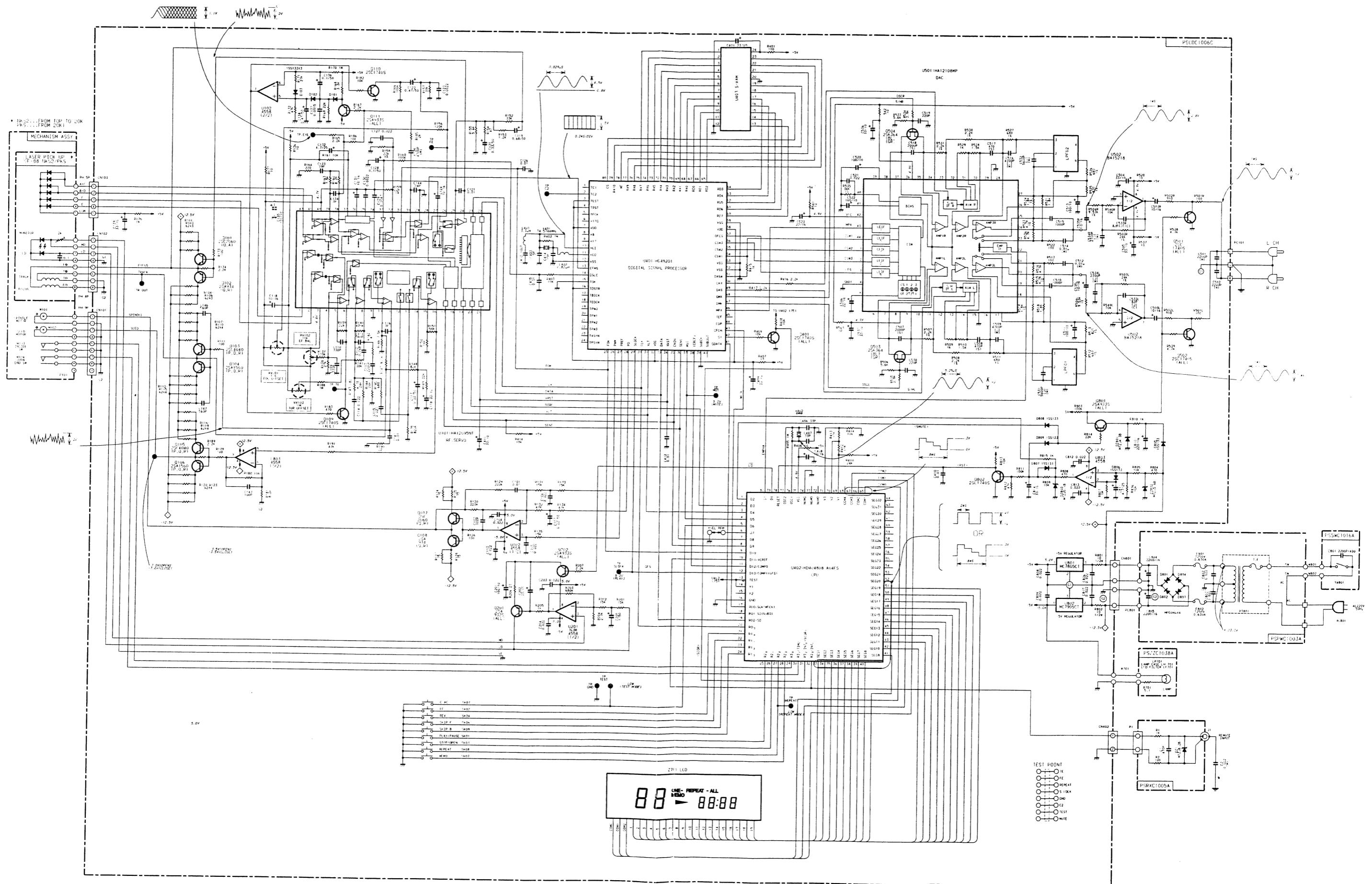
X1: GZA 9.1Y

X201 ~ 205: LN417YPH

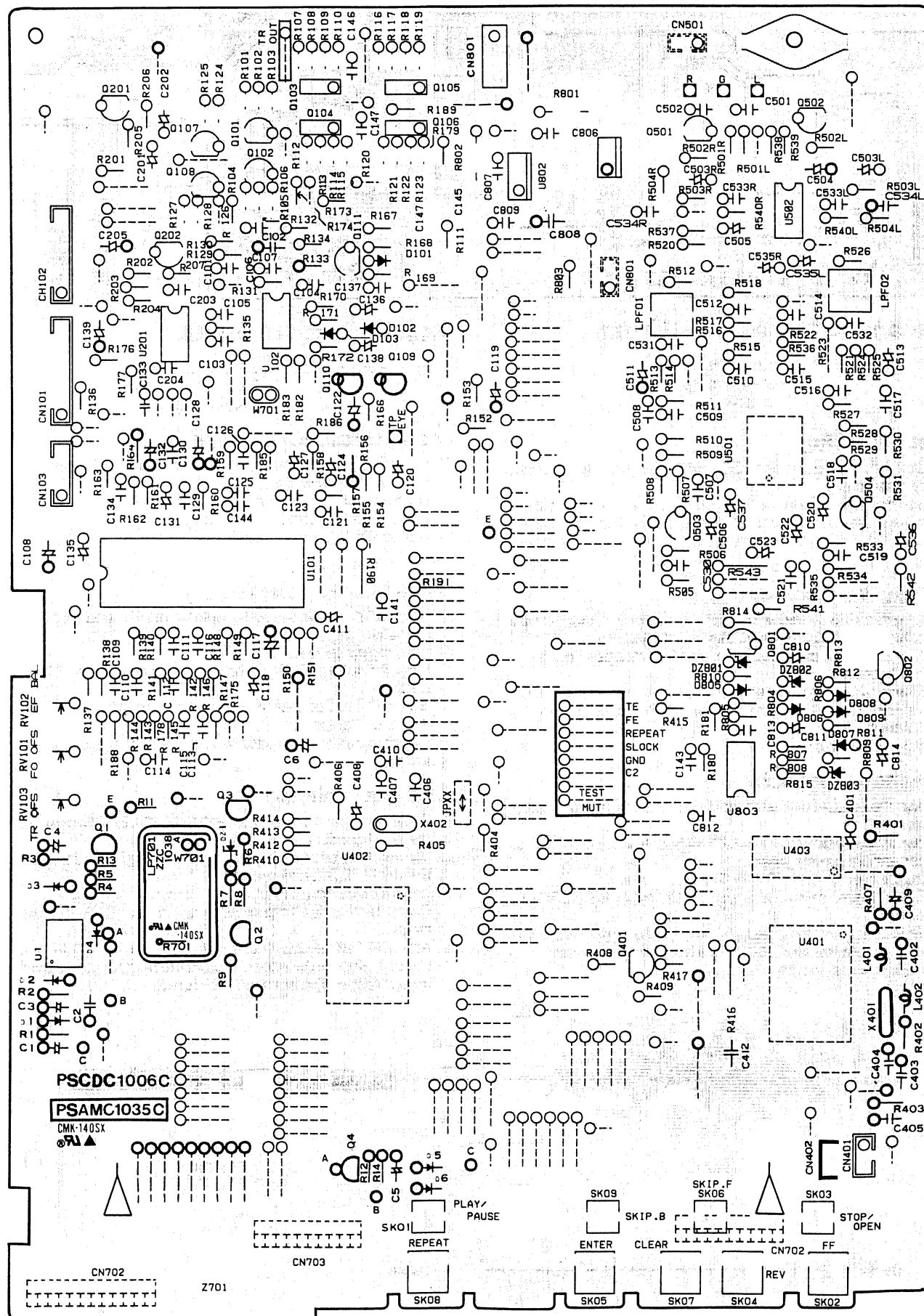
X206, 401: LN217RPH

X402: LN317GPH

Schaltbild CD-Player
Circuit diagram CD player

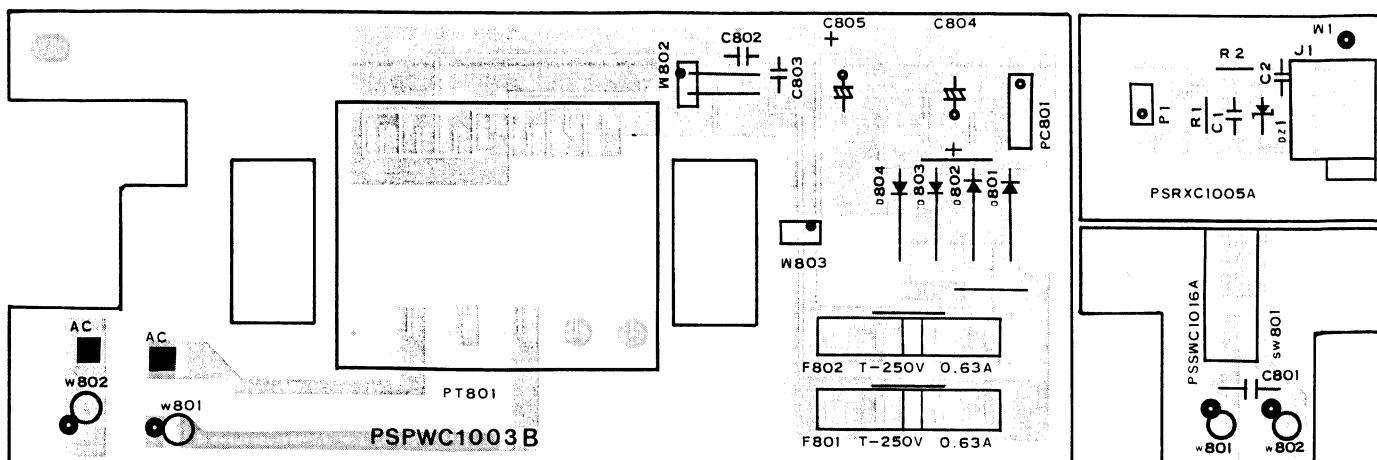


Grundplatine CD-Player Main P.C.B. CD player



Netzteil/IR-Eingang CD-Player

Power supply/IR input CD player



Abgleichanweisung CD-Player

Benötigte Meßgeräte

- Frequenzzähler
- Test CD Philips 3
- Oszilloskop

Spurabweichung

Dieser Abgleich kann auch ohne CD-Platte durchgeführt werden.

1. Gerät einschalten.
2. Oszilloskop an Testpunkt »TP. TR OUT« und Masse anschließen und auf Gleichspannung (DC) am Oszilloskop umschalten.
3. Mit RV 103 gleichspannungsmäßig auf 0 Volt ± 20 mV abgleichen.

Focus-Servo-Abgleich

1. Oszilloskop an Testpunkt »FE« und Masse anschließen und auf Gleichspannung (DC) am Oszilloskop umschalten.
2. CD-Platte einlegen und abspielen; den 0-Punkt des Focus-signals beachten.
3. Auf »STOP« schalten und den jetzt angezeigten Gleichspannungswert mit RV 101 auf den gleichen 0-Punkt abgleichen ± 20 mV (siehe Abb. 1).
4. Abgleich wiederholen.

EF-Balance-Abgleich

1. Während die »CLEAR«-Taste gedrückt wird, Gerät einschalten (Testmode).
2. Oszilloskop an Testpunkt »TE« und Masse anschließen und auf Gleichspannung umschalten.
3. CD-Platte einlegen und »PLAY«-Taste drücken.
4. »REPEAT«-Taste drücken, bis im Anzeigefeld »ONE REPEAT« erscheint.
5. Den Wellenzug am Oszilloskop mit RV 102 so abgleichen, daß die Plus- und Minushalbwelle auf den Nullpunkt bezogen symmetrisch ist (siehe Abb. 2).

Adjustment CD player

Instruments required:

- Frequency counter
- Test disc Philips 3
- Oscilloscope

Tracking offset adjustment

This tracking offset adjustment does not need a CD disc.

1. Set the unit power on.
2. Connect the oscilloscope to the test point "TP. TR OUT" and to ground. Switch to "DC" on the scope.
3. Adjust RV 103 on the main P.C.B. for 0 Volt (dc) ± 20 mV on the scope.

Focus-servo offset

1. Connect oscilloscope to the test point "FE" and to ground. Switch to "DC" on the scope.
2. Load a disc and playback.
3. Note the voltage (DC) on the scope and press the "STOP" button.
4. Adjust RV 101 so that the voltage becomes the same as step 3 ± 20 mV (see picture 1).
5. Repeat step 2 to 4 until the voltages in step 3 and 4 are identical.

EF signal balance

1. Power the unit on by pressing the key "CLEAR" on the front panel. The unit is set to "TEST" mode.
2. Connect the oscilloscope to the test point TE and to ground. Switch to "DC" on the scope.
3. Load a disc and playback.
4. Press the "REPEAT" button (set the unit to "ONE REPEAT" mode).
5. Adjust RV 102 so that the signal has symmetrical plus and minus swing on the scope. Adjust the height of the waveform for accurate adjustment (see picture 2).

Abb. 1

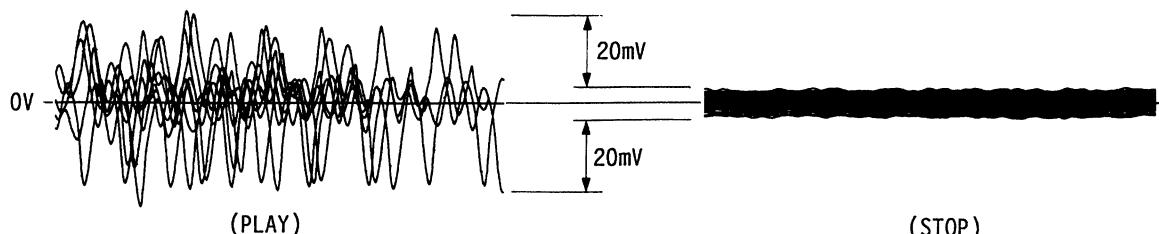
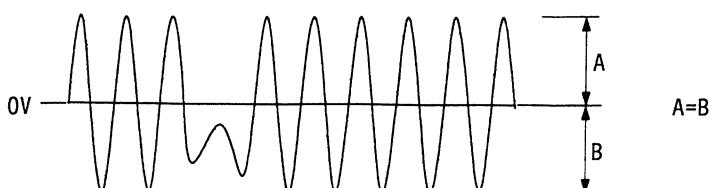
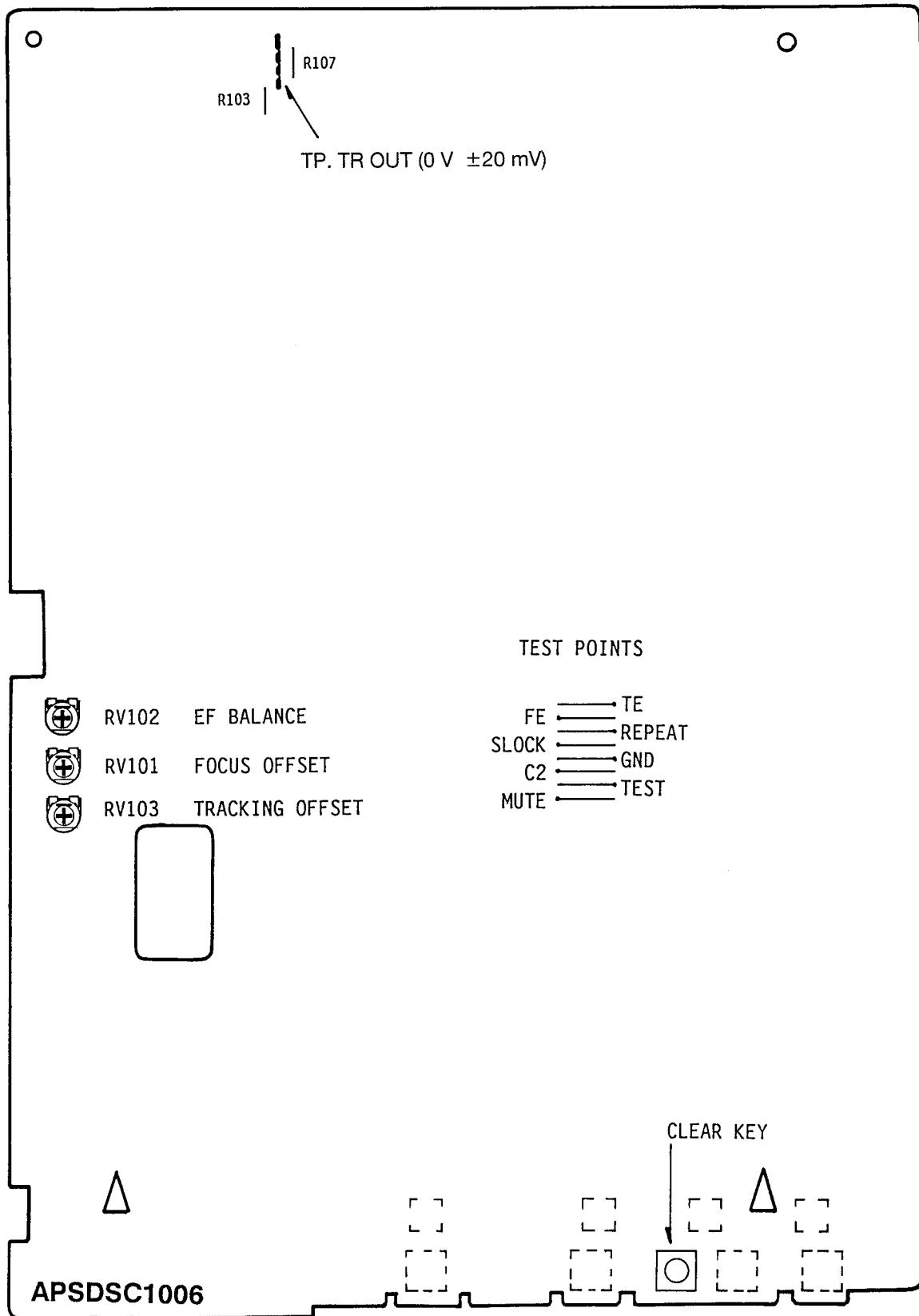


Abb. 2



Abgleichpunkte
Adjustment locations



Fehlerdiagnose

Achtung:

Während der folgenden Kontrollarbeiten nicht direkt von oben in das Laser-Abtastsystem blicken.

Das Abtastsystem von schräg oben betrachten und einen Abstand von mehr als 30 cm zwischen den Augen und dem Laser-Abtastsystem einhalten.

A: Überprüfung der Laserdiode

Die Objektivlinse des Laser-Abtastsystems bewegt sich etwa vier Sekunden auf und ab, wenn sich das Plattenfach ohne eingelegte Platte schließt. Der Laserstrahl ist ein sehr kleiner roter Punkt. Während sich die Linse auf und ab bewegt, überprüfen Sie, ob aus dem Laser-Tastsystem ein Laserstrahl kommt.

B: Suche des Brennpunkts

Nachdem sich das Plattenfach ohne eingelegte Platte geschlossen hat, bewegt sich das Laser-Abtastsystem zur Mitte der Platte, und die Objektivlinse des Laser-Abtastsystems bewegt sich für die Dauer von etwa vier Sekunden auf und ab.

Wenn der CD-Spieler diese Bewegung nicht ausführt, müssen Endannäherungsschalter (Close-end switch) und Wegbegrenzungsschalter (inside-limit switch) überprüft werden.

C: SLOCK Signal

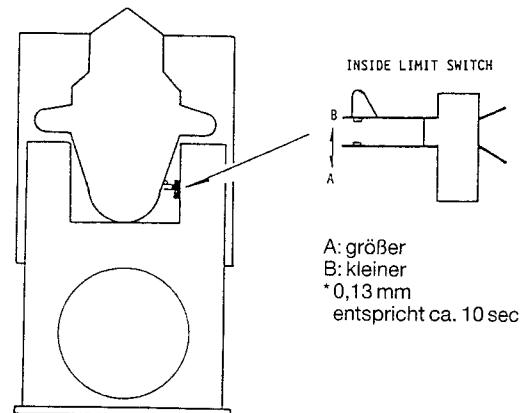
Überprüfung des Frame-Sync-Signals (U401/pin 29). Das GFS-Signal erhält einen hohen Pegel und bleibt in diesem Zustand.

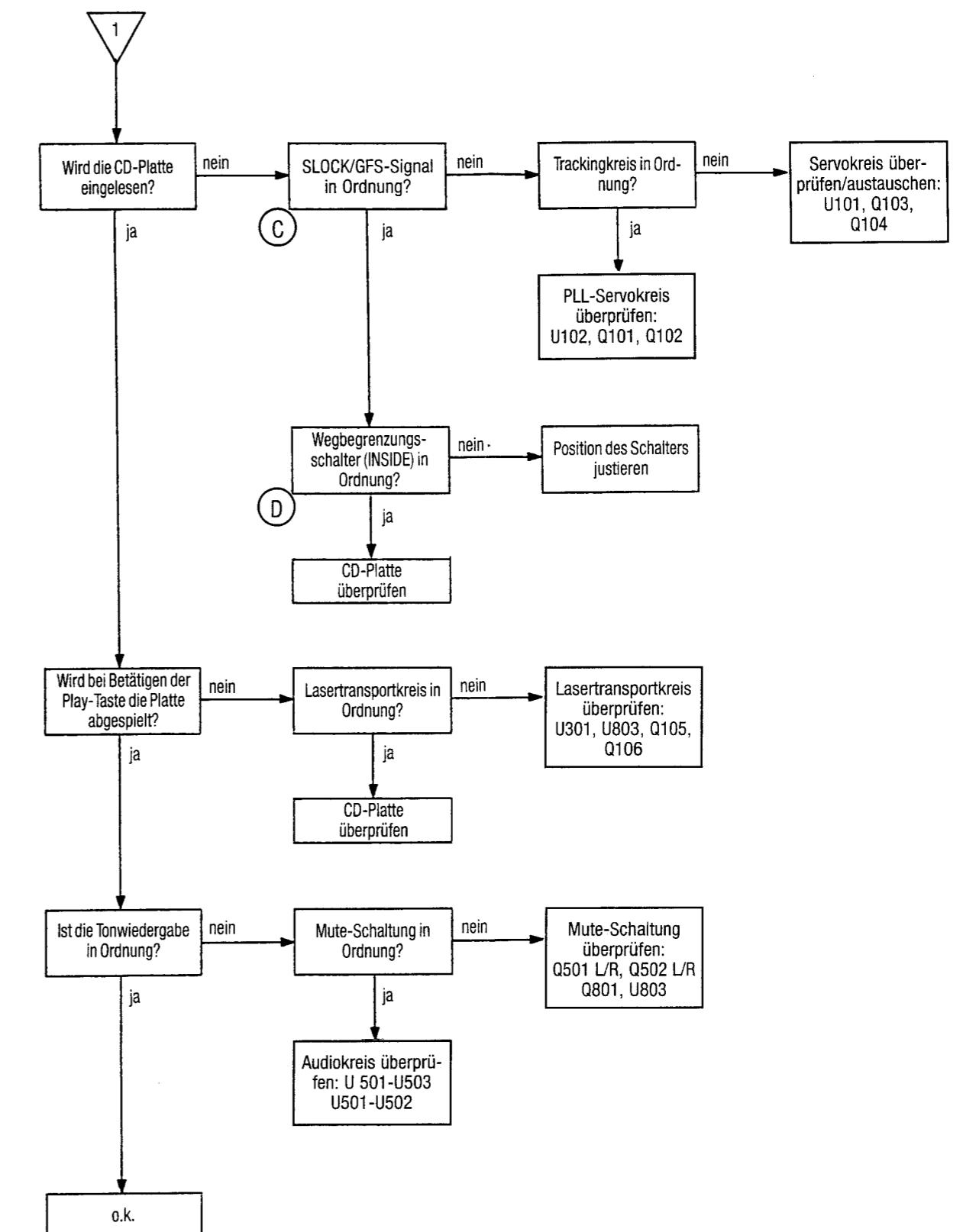
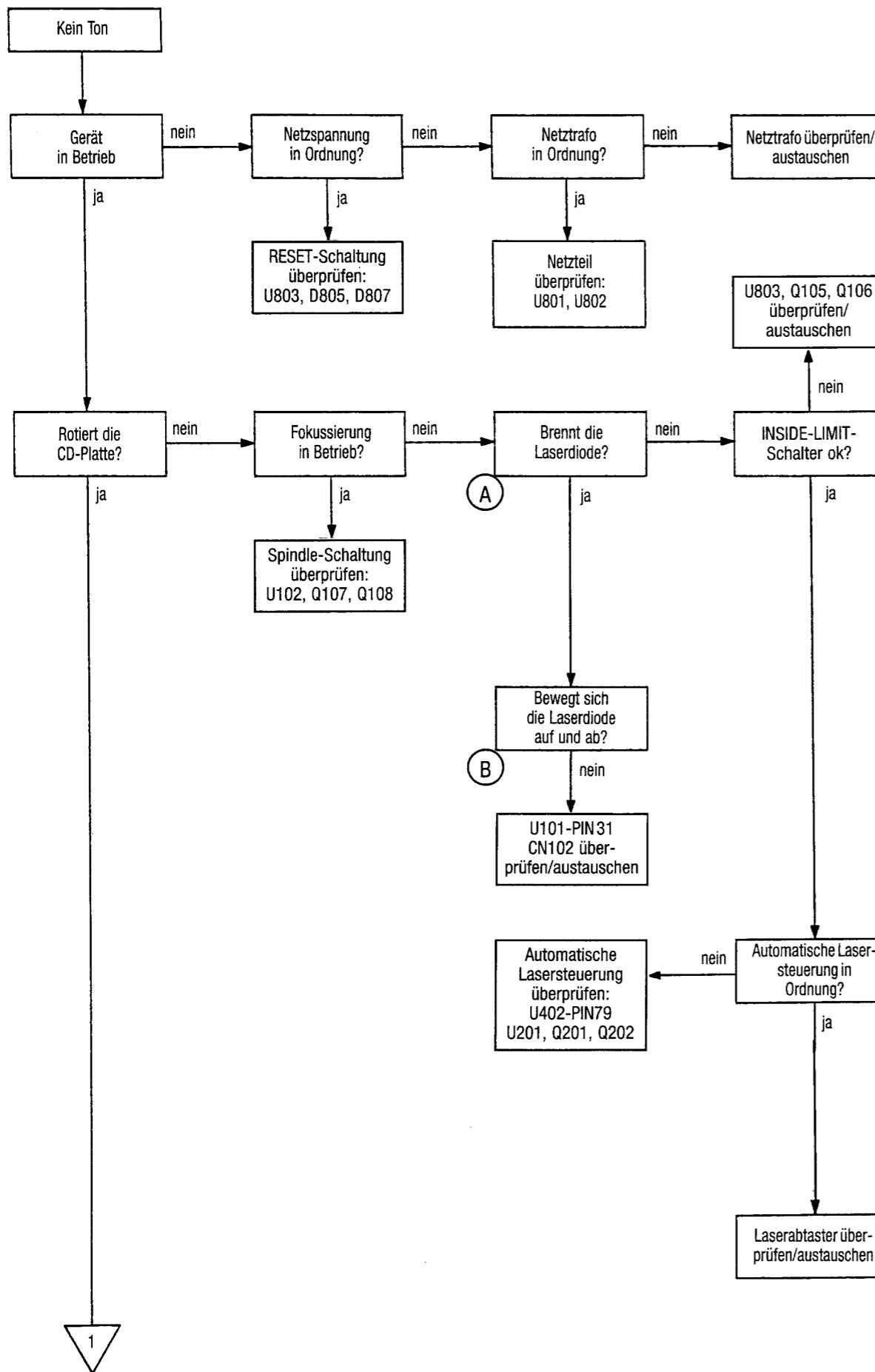
D: Position des Wegbegrenzungsschalters (inside-limit switch)

Überprüfen Sie, ob die Position des Schalters sich im Abtastanfangsbereich (Disk Lead-in area) der Platte befindet. Die Überprüfung der Position erfolgt folgendermaßen:

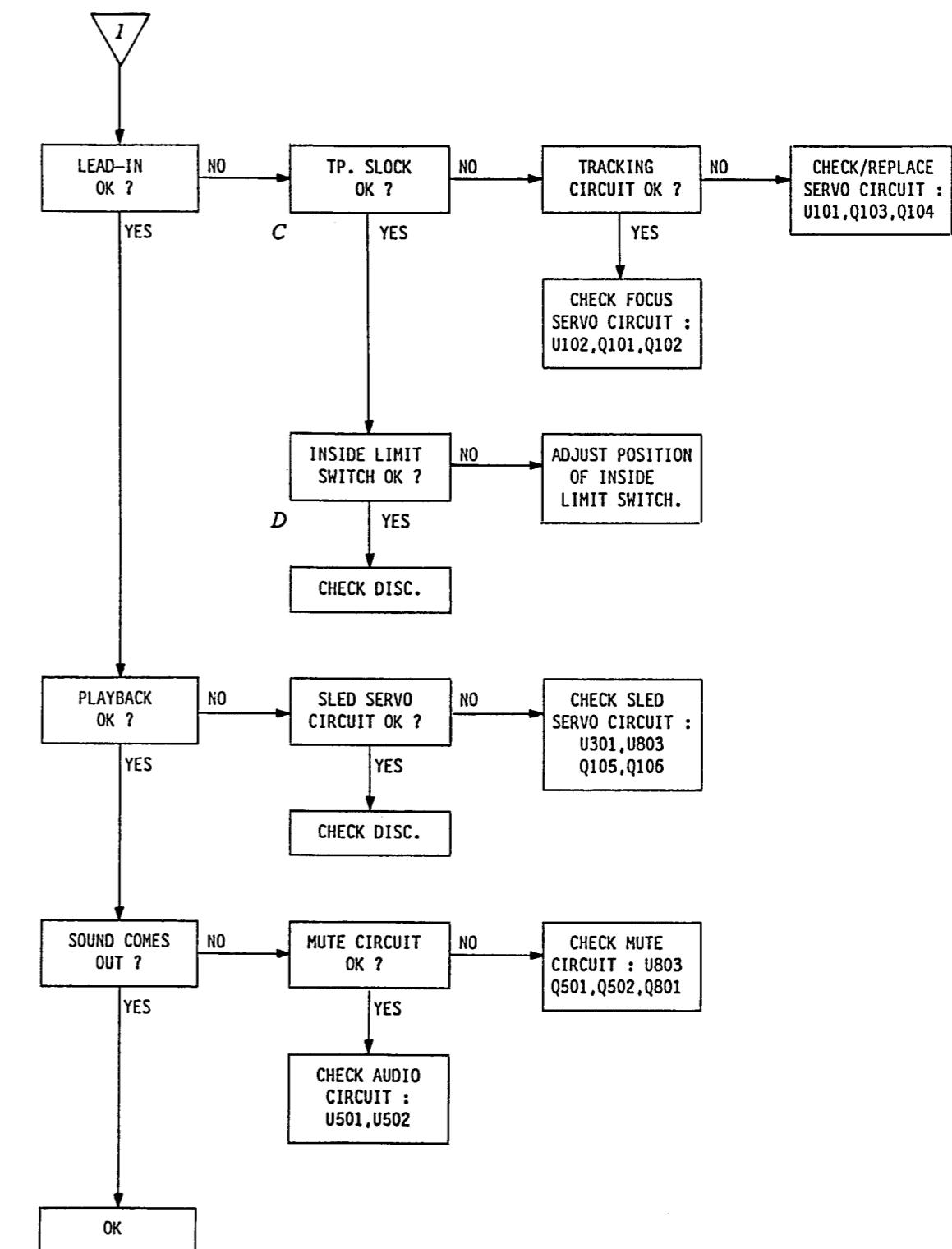
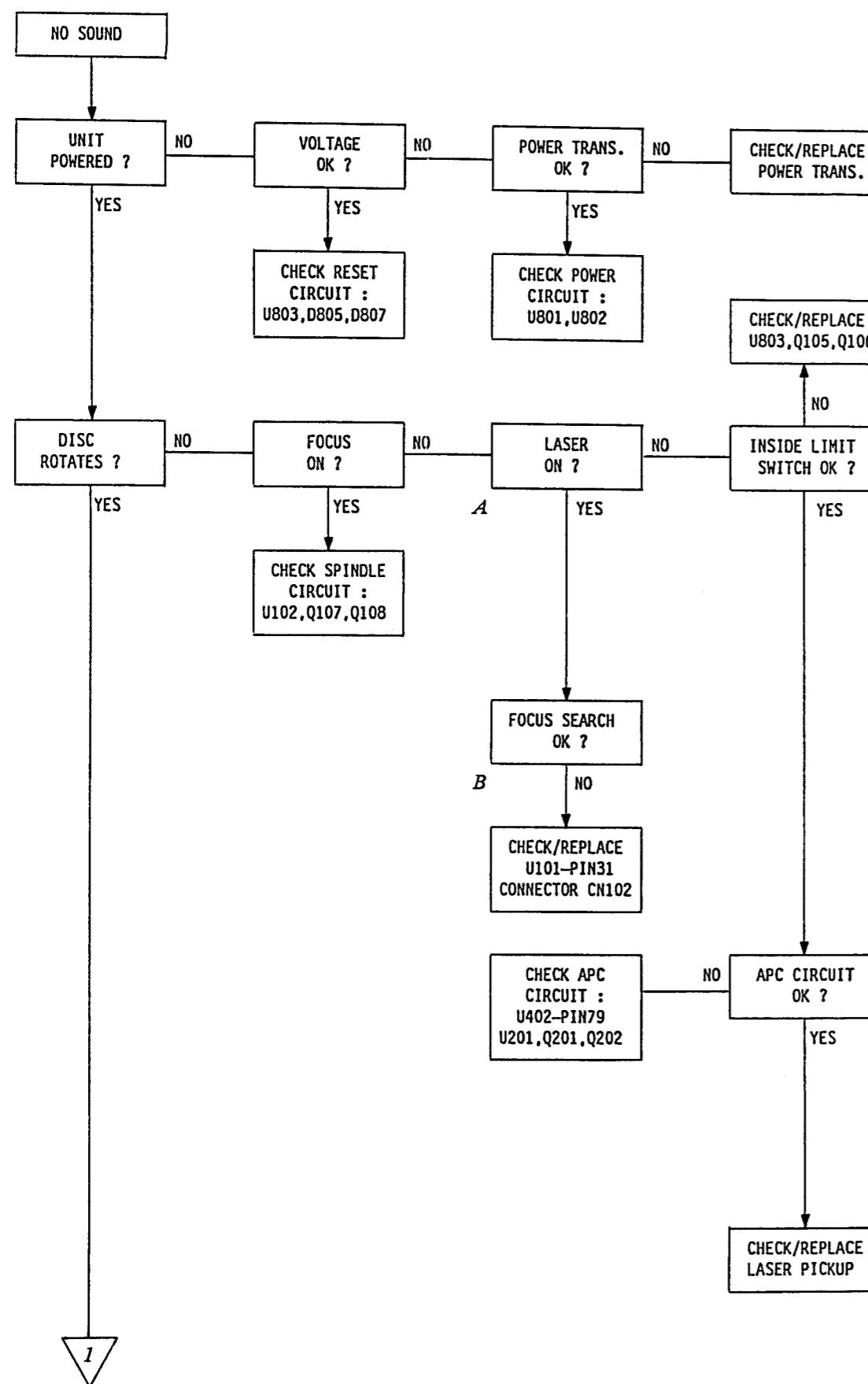
- Testdisc: Sony type 4

1. Testdisc in CD-Schlitten einlegen.
2. Gerät ausschalten.
3. Während die »CLEAR«-Taste gedrückt wird, Gerät wieder einschalten (Test mode).
4. Die Position des Schalters so einstellen, daß in der Anzeige 380 bis 480 erscheint.





Trouble shooting



Caution:

Do not view the laser pickup from directly above during the following check.

View the pickup on a slant from the upper side and keep a distance of more than .12 inches from your eyes to the laser pickup.

A: Laser diode light check

The object lens of the laser pickup goes up and down for about four seconds when the disc tray closes with no disc. The laser beam is a very small red point.

While the lens goes up and down, check that laser goes from the laser pickup.

B: Focus search

After the disc tray is closed with no disc, the laser pickup goes to the center of the disc and the object lens of the laser pickup begins going up and down for about four seconds.

If the player does not perform the above motion, check the close-end switch and the inside-limit switch.

C: SLOCK signal

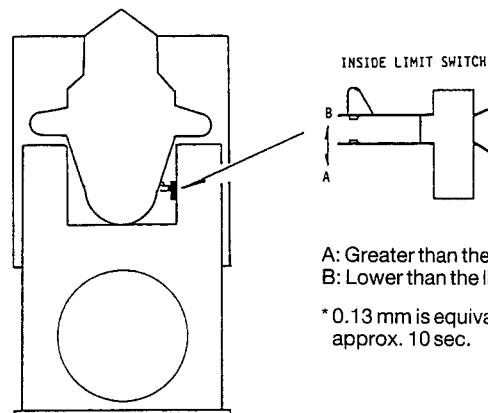
Judgment of frame sync signal (U401/pin 29). GFS signal turns to high and is locked.

D: Position of the inside limit switch

Check that the position of the switch is in the disc lead-in area. To check the position perform following:

- Test disc: SONY type 4

1. Set the CD disc to the disc tray.
2. Turn OFF the power switch.
3. By pressing the "CLEAR" key, set the unit "POWER ON" (Test mode).
4. Adjust the inside limit switch so the display shows from 380 to 480.

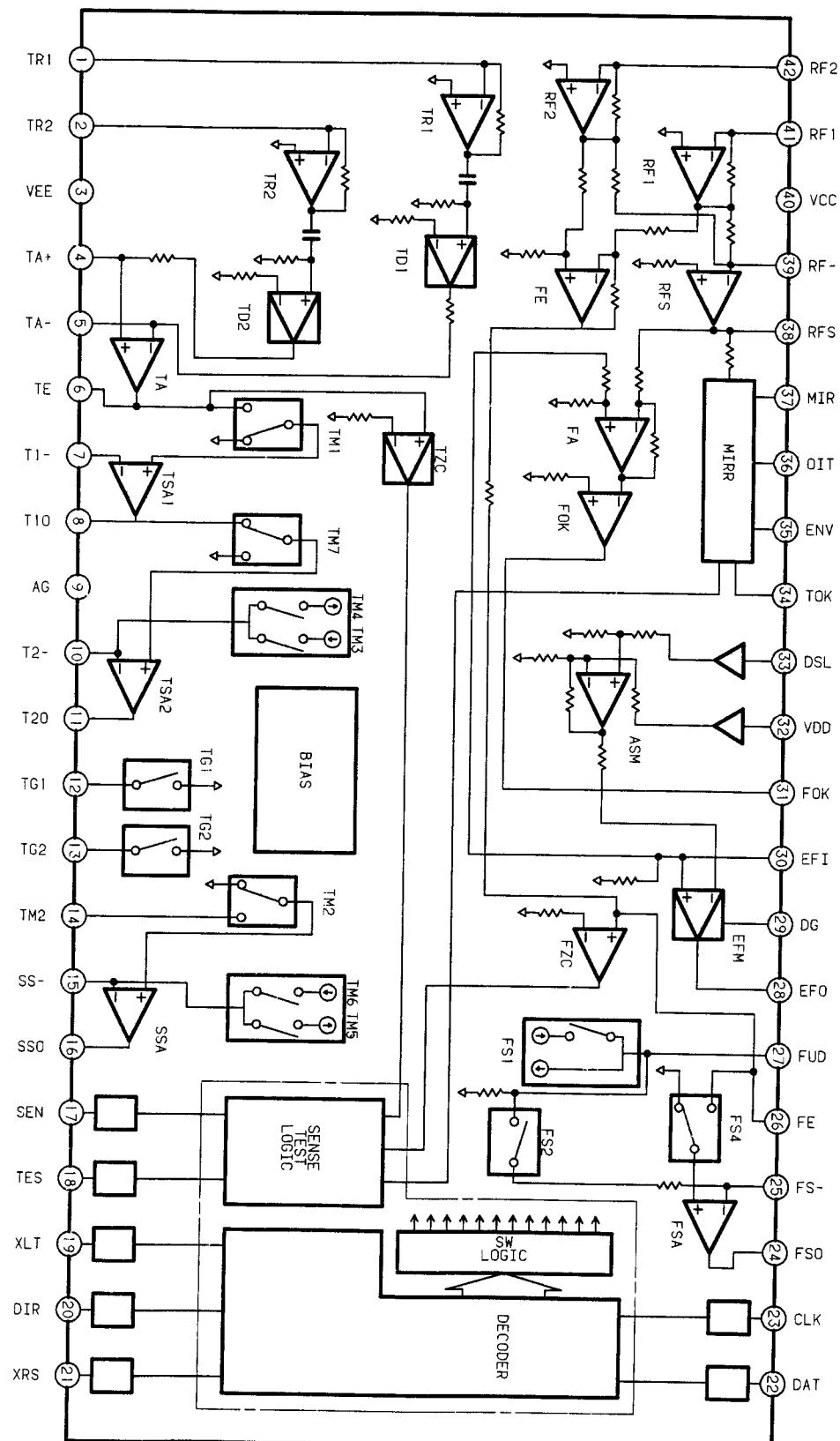


A: Greater than the limit.
B: Lower than the limit.

* 0.13 mm is equivalent to approx. 10 sec.

IC block diagrams

U101 HA12095NT
RF Amp, Servo Amp.



U401 HD49201
Digital Signal Processor

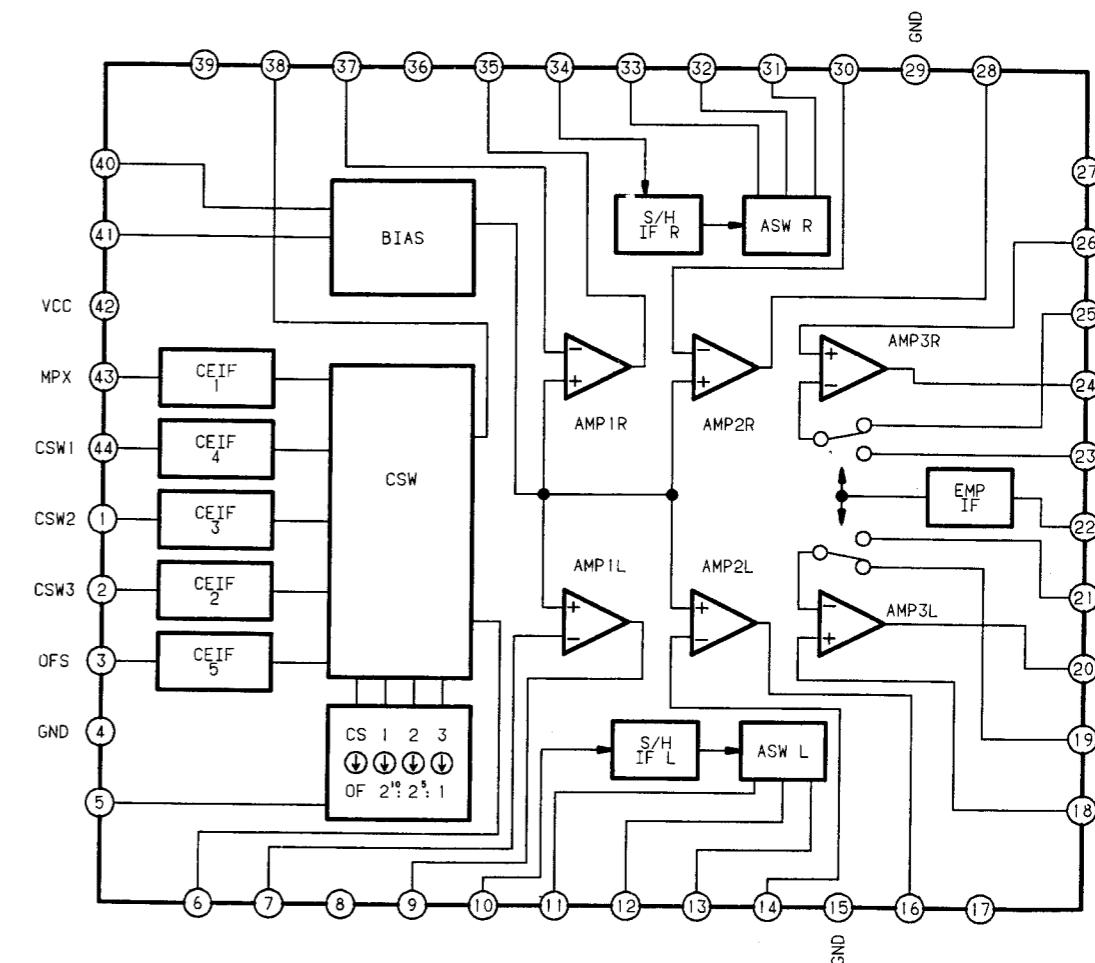
Pin No.	Symbol	I/O	Function
1	TC1	0	NC
2	TC2	I/O	TP, C2
3	TEST	I	Connect to +5V.
4	TRST	I	Connect to +5V.
5	TFCK	0	NC
6	X17G	0	NC
7	VDD	-	Connect to +5V.
8	X8	0	NC
9	X17	0	NC
10	XCI	I	X'tal oscillator input (34.5744MHz)
11	XCO	0	X'tal oscillator output.
12	VSS	-	Ground.
13	EFMS	I	EFM signal from U101.
14	DSLC	0	Data slice level control output.
15	TOK	I	Connect to ground.
16	TDSTR	I	Connect to ground.
17-24			NC
25	FOK	I	Focus OK data from U101.
26	PWM	0	Spindle motor drive signal.
27	PREF	0	Reference output for spindle motor.
28	PD	0	Phase comparator output for spindle motor.
29	SLOCK	0	Frame sync. lock signal output.
30	CLK	I	Clock for serial data form U402.
31	XLT	I	Data latch signal from U402.
32	VDD	-	Connect to +5V.
33	DATA	I	Serial control data from U402.
34	XRST	I	System reset data from U803.
35	CNIN	I	Clock data input for track numbers are counted.;
36	SENS	0	Outputs a number of tracks counted.
37	MUT	I	Muting input for DAC output.
38	QOK	0	Operational output of SUBCODE Q (low OK)
39	SUBCK	-	Connect to ground.
40	SUBOUT	-	NC
41	QDATA	0	SUBCODE Q output.
42	S1	0	SUBCODE SYNC.pulse output.
43	CFCK	0	CLOCK DATA output latches data from SUBCODE Q.
44	CDP	0	SUBCODE P output.
45	TEF	-	NC
46	MPX	0	CLOCK signal for L/R channel.
47	DMX	0	Outputs a L-ch discharge signal.
48	QMX	0	Outputs a R-ch discharge signal.
49	DAS	0	Outputs a L-ch S/H signal.
50	CKX	0	Outputs a R-ch S/H signal.
51	DASW	0	Ground
52	VSS	-	Ground
53	VSS	-	Ground
54	CSW1	0	Power supply control signal for DAC.
55	CSW2	0	Power supply control signal for DAC.

Pin No.	Symbol	I/O	Function
56	CSW3	0	Power supply control signal for DAC.
57	OFCS	0	Offset cancelling control signal.
58	VDD	-	+5V
59	VSS	-	Ground
60	RD7	0	DATA to U403.
61	RD6	0	DATA to U403.
62	RD5	0	DATA to U403.
63	RD4	0	DATA to U403.
64	RD3	0	DATA to U403.
65	RD2	0	DATA to U403.
66	RD1	0	DATA to U403.
67	RD0	0	DATA to U403.
68	RA0	0	ADDRESS to U403.
69	RA1	0	ADDRESS to U403.
70	RA2	0	ADDRESS to U403.
71	RA3	0	ADDRESS to U403.
72	RA4	0	ADDRESS to U403.
73	RA5	0	ADDRESS to U403.
74	RA6	0	ADDRESS to U403.
75	RA7	0	ADDRESS to U403.
76	RA8	0	ADDRESS to U403.
77	RA9	0	ADDRESS to U403.
78	WE	0	Write enable to U403.
79	RA10	0	ADDRESS to U403.
80	CS	0	Chip select DATA to U403.

U402 HD40808A01
CPU

Pin No.	Symbol	I/O	Function
1	D2	0	Turns to low to mute the unit signal output.
2	DIRC	0	Control signal to U101.
3	XLT	0	Servo control signal to U101, U401.
4	MUT	0	Turns to high to mute the audio signal.
5	D6	I	Keypad return signal.
6	D7	I	Selects remote control signal.(active low)
7	SENS	I	A kinds of timing inputs.
8	CNIN	I	Tracking pulse input.
9	FOK	I	When focus is in, turns to high.
10	VCREF	I	Remote control signal input.
11	D12	I	CRCF signal from U401.
12	GFS	I	When SPINDLE SERVO is locked, turns to high.
13	TEST	I	+5V
14	X1	-	+5V
15	X2	-	NC
16	GND	-	Ground
17	WFCK	I	
18	SUBQ	I	SUBCODE Q input from U401.
19	DATA	-	Serial control DATA.
20	CLK	-	Clock to transfer serial DATA.
21-28	R10-23	I	Keypad return signal.
29	R30	I	Detects the head location, inside limit switch.
30	OPEND	I	When the disc tray fully opens, this turns to low.
31	SCOR	I	SUBCODE SYNC, S0 + S1 input.
32	R33	I	Remote control signal input.
33-51	SEG1-19	0	Segment data.
52-64		-	NC
65	COM1	0	Display data.
66	COM2	0	Display data.
67	COM3	0	Display data.
68	COM4	-	NC
69	V1		LCD bias voltage.
70	V2		LCD bias voltage.
71	V3		LCD bias voltage.
72	NUM0		NC
73	NUM0		NC
74	NUMG		Ground
75	VCC		+5V
76	OSC1	I	X'tal oscillator input. (4MHz)
77	OSC2	0	X'tal oscillator output.
78	RESET	I	RESET input signal
79	LD-	0	When this level is low, LASER DIODE is on.
80	EMPHA	0	Turns to high, the disc data is emphasized.

U501 HA12018MP
DAC



Pin No.	Symbol	I/O	Function
1	CSW2	I	Controls current switch 2.
2	CSW3	I	Controls current switch 3.
3	OFS	I	Controls Offset current switch.
4	GND1	-	Ground
5	BYP1	-	Bypass
6	TEST1	-	Left channel DAC output.
7	IAIL	I	Left channel negative input for integral amp.
8	VCC2	-	Power supply.
9	IAOL	O	Left channel input for integral amp.
10	S/HL	I	Left channel control signal for sample-hold amp.
11	ASPL	I	Left channel input for analog switch.
12	ASNL	I	Left channel negative input for analog switch.
13	ASOL	O	Left channel output from analog switch.
14	SHNL	I	Left channel sample-hold negative input.
15	GND2	-	Ground
16	SHOL	O	Left channel output from sample-hold amp.
17	REFL	-	Left channel referential voltage.
18	EPL	I	Left channel input signal for emphasis
19	EN1L	I	Left channel negative input (1) for emphasis
20	EOL	O	Left channel output signal from emphasis
21	EN2L	I	Left channel negative input (2) for emphasis
22	ESW	I	Controls emphasis ON/OFF
23	EN2R	I	Right channel negative input (2) for emphasis
24	EOR	O	Right channel output signal from emphasis
25	ENIR	I	Right channel negative input (1) for emphasis
26	EPR	I	Right channel input signal for emphasis
27	REFR	-	Right channel referential voltage.
28	SHOR	O	Right channel output from sample-hold amp.
29	GND3	-	Ground
30	SHNR	I	Right channel negative input for sample-hold amp.
31	ASOR	O	Right channel output from analog switch.
32	ASNR	I	Right channel negative input for analog switch.
33	ASPR	I	Right channel input for analog amp.
34	S/HR	I	Right channel control signal for sample-hold amp.
35	IAOR	O	Right channel output from integral amp.
36	VCC3	-	Power supply
37	IAIR	I	Right channel negative input for integral amp.
38	TES2	-	Right channel DAC output.
39	BYP2	-	Bypass
40	ISET	-	Connects resistor fixes current drain.
41	BYP3	-	Bypass
42	VCC1	-	Power supply for DAC
43	MPX	I	Controls MPX switch
44	CSW1	I	Controls current switch 1.

Ersatzteilliste elektrische Teile

Spare parts list electrical parts

Receiver

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
39 250 00	HF-Platine	RF P.C.B.	TC 20	F 7
23 964 00	Transistor BC 547	Transistor BC 547	T 301	A 4
23 965 00	Transistor BC 558	Transistor BC 558	T 703-705	A 4
31 309 00	Transistor BF 451	Transistor BF 451	T 201	A 3
31 318 00	Transistor BC 550	Transistor BC 550	T 601-603	A 1
23 951 00	Diode 1 N 4148	Diode 1 N 4148	D 302/602	A 2
31 463 00	Diode 1 N 4148	Diode 1 N 4148	D 301	A 1
31 313 00	Diode KV 1260	Diode KV 1260	D 401	B 1
15 107 00	IC TDA 1578 A Stereo-Decoder	IC TDA 1578 A Stereo decoder	IC 301	C 1
38 274 00	IC UPD 1708	IC UPD 1708	IC 701	C 9
23 701 00	IC 7805 1,5 A, 5 V Stabi	IC 7805 1,5 A, 5 V Stabi	IC 702	B 1
38 439 00	IC LA 1265 ZF T 1000	IC LA 1265 ZF T 1000	IC 201	B 4
23 293 00	Trimmer-Kondensator	Trimmer capacitor	C 408	A 3
31 398 00	Sicherungs-Widerstand 100 Ohm	Fuse resistor 100 Ohm	R 210/318	A 2
01 255 00	Trimmpot 50 K/47 K liegend	Trimming poti 50 K/47 K	R 301/308	A 2
15 122 00	Akkumulator 60 DK Ni-Cd 1,2 V	Accumulator 60 DK Ni-Cd 1,2 V		B 4
23 423 00	Filter LPF-V10A1	Filter LPF-V10A1	Fi 301/302	A 9
31 311 00	Spule MW-Oszillator	Coil MW oscillator	L 401	A 4
31 944 00	Spule LW-Oszillator	Coil LW oscillator	L 402	A 3
38 442 00	Spule Quadratur	Coil quadratur	L 201	A 6
38 443 00	Spule Quadratur	Coil quadrature	L 202	A 6
38 454 00	Spule AM-ZF	Coil AM-ZF	L 204	A 3
31 310 00	Filter Keramik 455	Filter ceramic 455	Fi 204	A 4
31 762 00	Keramikfilter SFE 10,7	Filter ceramic SFE 10,7	Fi 201/202	A 3
38 440 00	Keramikfilter AM BFU 455 C	Filter ceramic AM BFU 455 C	Fi 203	A 3
31 656 00	Tastatur 3fach	Key set 3-switches	S 1	C 0
18 154 00	Lampe blau	Lamp blue	LCD	A 6
18 155 00	LCD-Display	LED display		C 3
31 530 00	Tuner-UKW	Tuner-UKW		D 1
20 930 00	Ferritantenne	Wave magnet	TC 21	B 8
18 238 00	Antennenbuchse	Antenna socket	TC 22	B 0
39 252 00	Bedienteil-Platine	Control P.C.B.	TC 23	C 4
11 241 00	Diode 1 N 4148	Diode 1 N 4148	D 711-715	A 2
23 366 00	Taste KHH 10908	Button KHH 10908	Tuner	A 4
39 246 00	Klangregler-Platine	Tone control P.C.B.	TC 24	F 1
03 975 00	Transistor BC 338 B	Transistor BC 338 B	T 802/804	A 4
23 964 00	Transistor BC 547 B	Transistor BC 547 B	T 901-910	A 4
38 327 00	Transistor BC 327-16	Transistor BC 327-16	T 801/803/903	A 2
31 729 00	Diode 1 N 4002	Diode 1 N 4002	D 913-916	A 2
38 541 00	Diode 1 N 4148	Diode 1 N 4148	D 801	A 0
38 616 00	Zenerdiode ZY 5,6	Zenerdiode ZY 5,6	D 806	A 2
03 847 00	IC LM 340 T 12 Stabi 12 V	IC LM 340 T 12 Stabi 12 V	IC 909/910	B 1
23 257 00	IC LA 6458 DS Dual-OP	IC LA 6458 DS Dual-OP	IC 802, 803, 901-905	A 9
31 759 00	IC L 7912 CV	IC L 7912 CV	IC 908	A 6
31 961 00	IC MC 33078 P	IC MC 33078 P	IC 801	A 6
38 277 00	IC TC 9149	IC TC 9149	IC 907	B 7
38 278 00	IC LC 7818	IC LC 7818	IC 906	B 9
38 441 00	IC IR-Empfänger	IC IR receiver	IC 911	B 6
38 490 00	Drehwiderstand Bass	Rotary resistor Bass	R 829/830	B 2
38 491 00	Drehwiderstand Treble	Rotary resistor Treble	R 819/820	B 2
38 492 00	Drehwiderstand Balance	Rotary resistor Balance	R 805/806	B 2
38 493 00	Drehwiderstand Loudness	Rotary resistor LOUDNESS	R 803/804	B 2
23 578 00	Chinch-Buchse 4fach	Chinch socket 4	2 X	B 0
38 539 00	Chinch-Buchse 1fach	Chinch socket 1	CD-RC	A 5
31 331 00	Montageclip TO-220	Mounting clip TO-220	IC12V	A 0
39 159 00	Lautstärkepoti kpl.	Volume potentiometer	TC 25	C 9
39 253 00	Quellenumschalter-Platine	Mode selection P.C.B.	TC 26	C 5
38 495 00	LED LN 417 YPH gelb	LED LN 417 YPH yellow	D 903-907	A 3
38 496 00	LED LN 217 RPH rot	LED LN 217 RPH red	D 908	A 3
38 497 00	Halter LED	Holder LED		A 2
23 366 00	Taste KHH 10908	Button KHH 10908		A 4
38 410 00	Anzeigegerät (Power)	Power instrument	PA 20	C 5
39 251 00	Power-Anzeige-Platine	Power indication P.C.B.	PA 21	C 3
23 964 00	Transistor BC 547 B T092	Transistor BC 547 B T092	T 401/402	A 4
02 440 00	Zenerdiode ZPD 3,9	Zenerdiode ZPD 3,9	T 403/404	A 5
11 241 00	Diode 1 N 4148	Diode 1 N 4148	D 405	A 2
38 618 00	Diode BAV 20	Diode BAV 20	D 401/402	A 1
01 256 00	Trimmpot 5 K/4,7 K liegend	Trimming poti 5 K/4,7 K	R 413/414	A 4
38 407 00	Netztrafo	Power transformer	PA 22	E 3
39 266 00	Endstufen-Platine	Output amplifier P.C.B.	PA 23	F 3
38 429 00	IC STK 4241 MK 5	IC STK 4241 MK 5	IC 101	E 2
38 432 00	Gleichrichter	Rectifier	GL 101	B 5
38 431 00	ELKO radial 6800/80	ELCO 6800/80	C 103/104	C 4
23 433 00	METOX-Widerstand 4,7 Ohm/1 Watt	METOX resistor 4,7 Ohm/1 Watt	R 117/118	A 1
38 065 00	Drahtwiderstand 22 Ohm	Wire resistor 22 Ohm	R 119/120	A 6
31 854 00	Sicherungs-Widerstand 100 Ohm	Fuse resistor 100 Ohm	R 116	A 2

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
39 075 00	Kurzschlußsicherungs-Platine	Short circuit fuse P.C.B.	PA 24	C 1
38 127 00	Transistor 2 SA 1207 R T092	Transistor 2 SA 1207 R T092	T 401/402	A 3
38 128 00	Transistor 2 SA 1209 T0126	Transistor 2 SA 1209 T0126	T 404	A 5
38 129 00	Transistor 2 SC 2911 T0126	Transistor 2 SC 2911 T0126	T 403	A 5
11 241 00	Diode 1 N 4148	Diode 1 N 4148	D 401/402	A 2
39 264 00	Netzschalter-Platine	Power switch P.C.B.	PA 25	E 2
03 975 00	Transistor BC 338 B	Transistor BC 338 B	T 203	A 4
23 965 00	Transistor BC 558 B T092	Transistor BC 558 B T092	T 202	A 4
38 458 00	Transistor BC 548 C	Transistor BC 548 C	T 201/204	A 2
02 419 00	IC HBF 14013A Flip-Flop	IC HBF 14013A Flip-Flop	IC 202	A 7
23 701 00	IC 7805 1,5 A 5 V Stabi	IC 7805 1,5 A 5 V Stabi	IC 201	B 1
23 118 00	Gleichrichter B40 C800	Rectifier B40 C800	GL 201	B 4
31 729 00	Diode 1 N 4002	Diode 1 N 4002	D 208/209	A 2
38 541 00	Diode 1 N 4148	Diode 1 N 4148	D 201-207	A 0
38 635 00	Zenerdiode ZPD 6,8	Zenerdiode ZPD 6,8	D 202	A 1
11 943 00	Elko Radial 2200/35, D=18 mm, H=35 mm	Elko radial 2200/35, D=18 mm, H=35 mm	C 209	B 0
38 117 00	METOX 5%-Widerstand 560 Ohm/1 Watt	METOX resistor 39 Ohm/1 Watt	R 221-224	A 1
38 606 00	Widerstand 39 Ohm/½ Watt	Resistor 39 Ohm/½ Watt	R 208	A 0
38 408 00	Trafo El	Transformer El	TR 201	C 2
38 435 00	Tastensatz 3fach	Key set 3-switches	NS + SP	B 6
38 604 00	Thermoschalter 100"	Thermo switch 100"	S 2	B 4
38 516 00	Relais 1A DC 6V	Relay 1A DC 6V	RE 201	B 7
23 397 00	Buchse Klinken	Socket	Headphone	A 9
39 254 00	Lautsprecherbuchsen-Platine	Speaker socket P.C.B.	PA 26	D 5
31 463 00	Diode 1 N 4148 (A)	Diode 1 N 4148 (A)	D 301/302	A 1
38 430 00	Relais 1XU DC 24V	Relay 1XU DC 24V	RE 301/302	B 9
38 031 00	Push Terminal	Speaker socket	Speak	B 1
38 069 00	Chinch-Buchse 2fach	Pin jack 2-jacks	IN/LR	A 7
Nur für/open AIR 1000				
39 255 00	Lichtorgel-Netz-Platine	Flashlight power P.C.B.	PA 27	D 8
38 447 00	Triac 600V 4 A	Triac 600V 4 A	TR 1-3	A 8
38 445 00	IC U 217 B	IC U 217 B	IC 3-5	B 1
38 446 00	IC CQY 80 NG Optokoppler	IC CQY 80 NG	IC 6-8	A 6
23 109 00	Diode 1 N 4007	Diode 1 N 4007	D 5-7	A 1
38 444 00	Buchse Euronorm AC 250V 2,5A 3fach	Socket Euronorm AC 250V 2.5A 3set	Netz	B 8
39 257 00	Lichtorgel-Bedienteil-Platine	Flashlight control P.C.B.	PA 28	D 6
23 964 00	Transistor BC 547 B T092	Transistor BC 547 B T092	T 1/3	A 4
23 965 00	Transistor BC 558 B T092 ***024340	Transistor BC 558 B T092 ***024340	T 2	A 4
23 257 00	IC LA 6458 DS Dual-OP ***231150	IC LA 6458 DS Dual-OP ***231150	IC 1/9	A 9
38 514 00	IC MC 33079 4fach OP	IC MC 33079 4-set OP	IC 2	A 9
11 241 00	Diode 1 N 4148	Diode 1 N 4148	D 1-4	A 2
11 810 00	Drossel 100 µH	Coil 100 µH	DR 1	A 3
38 471 00	Drehwiderstand 22 K lin.	Rotary resistor 22 K	R 16, 28, 38, 66	A 5
38 472 00	Drehschalter	Rotary switch	S 1	A 5
38 584 00	Buchse-Klinken	Socket	Microphone	B 0
39 300 00	Lichtorgel-LED-Platine	Flashlight LED P.C.B.	PA 29	B 0
38 500 00	Leuchtdiode gelb	LED yellow	D 6	A 3
38 501 00	Leuchtdiode grün	LED green	D 5	A 3
38 502 00	Leuchtdiode rot	LED red	D 7	A 3

Cassettenrecorder/Cassette recorder

Bestell-Nr./ Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
27 621 00	Cassettenrecorder FLS 902 kpl.	Cassette deck FLS 902 assembly		G 2
45 275 00	Grundplatine YDO 9010013	Main P.C.B. YDO 9010013		E 9
37 727 00	Aussteuerungsreglerplatine YDO 9010020	Record level P.C.B. YDO 9010020		C 7
37 728 00	Schalterplatine YDO 9010031	Switch P.C.B. YDO 9010031		C 9
32 997 00	IC LA 3161	IC LA 3161	IC 4	B 0
32 998 00	IC TC 4066 BP	IC TC 4066 BP	IC 2	B 0
13 558 00	IC LB 1416	IC LB 1416	IC 201	B 5
37 730 00	IC LA 2746	IC LA 2746	IC 3	C 3
40 799 00	IC LA 3246	IC LA 3246	IC 1	B 2
24 533 00	Transistor 2 SC 2634 S	Transistor 2 SC 26345 S	Q 1-14, 18, 19, 21-24	A 3
03 728 00	Transistor 2 SC 1317 R	Transistor 2 SC 1317 R	Q 15-17, 20	A 5
11 241 00	Diode 1 N 4148	Diode 1 N 4148	D 1-6, 301	A 2
23 214 00	Diode GZA 9.1 Y	Diode GZA 9.1 Y	X 1	A 1
13 955 00	LED LN 217 RP rot	LED LN 2178 RP red	X 206, 401	A 6
14 301 00	LED LN 317 GP grün	LED LN 317 GP green	X 402	A 6
13 954 00	LED LN 417 YP gelb	LED LN 417 YP yellow	X 201-205	A 6
34 030 00	Löschoszillatortspule	Oscillator coil	L 10	A 7
34 031 00	Oszillatortspule	Oscillator coil	L 1-4	A 7
31 129 00	Sicherungswiderstand 4,7 Ohm ½ Watt	Fuse resistor 4.7 Ohm ½ Watt	R 109, 122	A 2
34 032 00	Drehwiderstand Aussteuerung	Rotary resistor rec. level	VR 201	B 1
29 747 00	Druckschalter	Push switch	Dolby, Hi-SP, Dubbing	B 1
34 033 00	A/W-Schiebeschalter	Rec/PC switch	SW 1	A 8
34 034 00	Mikrofonbuchse	Microphone jack		B 3

CD-Player/CD player

Bestell-Nr./Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
45 903 00	Grundplatine	Main P.C.B.	B 1	G 7
45 904 00	Netzteilplatine	Power supply P.C.B.	B 4	E 0
46 019 00	Buchsenplatine Chinch RC	Remote jack P.C.B.	B 5	C 6
37 766 00	IC TC 4071 BF	IC TC 4071 BF	U 1	A 8
45 906 00	IC HA 12095 NT	IC HA 12095 NT	U 101	C 3
12 882 00	IC NJM 4558 D	IC NJM 4558 D	U 102, 201, 803	B 1
45 907 00	IC HD 49201	IC HD 49201	U 401	D 4
45 908 00	IC HD 404808 A 01	IC HD 404808 A 01	U 402	D 5
45 314 00	IC 5816	IC 5816	U 403	C 6
45 909 00	IC HA 12108 MP	IC HA 12108 MP	U 501	C 6
45 910 00	IC BA 15218	IC BA 15218	U 502	A 6
32 261 00	IC MC 7805 CT	IC MC 7805 CT	U 801	B 7
32 268 00	IC MC 7905 CT	IC MC 7905 CT	U 802	B 0
23 438 00	Transistor 2 SB 709 A 2, AS Chip	Transistor 2 SB 709 A 2, AS Chip	Q 1-4	A 2
29 582 00	Transistor 2 SC 2060	Transistor 2 SC 2060	Q 101, 107	A 6
24 796 00	Transistor 2 SA 934	Transistor 2 SA 934	Q 102, 108	A 6
45 318 00	Transistor 2 SC 4040	Transistor 2 SC 4040	Q 103, 105	A 4
45 319 00	Transistor 2 SA 1560	Transistor 2 SA 1560	Q 104, 106	A 4
34 692 00	Transistor 2 SC 1740	Transistor 2 SC 1740	Q 109, 110, 401, 501, 502, 802	A 2
34 601 00	Transistor 2 SA 933 S	Transistor 2 SA 933 S	Q 111, 201, 202, 801	A 6
45 911 00	Transistor 2 SK 364	Transistor 2 SK 364	Q 503, 504	A 7
01 241 00	Diode 1 N 4148	Diode 1 N 4148	D 1-4	A 2
45 912 00	Diode DAP 202 K Chip	Diode DAP 202 K Chip	D 5	
24 750 00	Diode 1 SS 133	Diode 1 SS 133	D 101-103, 805-809	A 2
40 369 00	Diode MPG06G	Diode MPG06G	D 801-804	A 2
11 043 00	Zenerdiode MA 3062 Chip	Zenerdiode MA 3062 Chip	DZ 1	A 2
23 797 00	Zenerdiode ZDP 4,3	Zenerdiode ZDP 4,3	DZ 801	A 2
06 040 00	Zenerdiode ZDP 5,6	Zenerdiode ZDP 5,6	DZ 802	A 2
06 872 00	Zenerdiode ZPD 5,1	Zenerdiode ZPD 5,1	DZ 803	A 1
45 913 00	Spule 3,3 μ H	RF coil 3,3 μ H	L 401	A 3
45 322 00	Filter LC 20 kHz	Filter LC 20 kHz	LPF 01, 02	B 1
37 079 00	Keramik-Oszillator 4,0 MHz	Ceramic oscillator 4.0 MHz	X 402	A 9
45 914 00	Quarz 34,5744 MHz	Crystal 34.5744 MHz	X 401	B 3
45 320 00	LCD-Display	LCD Display	Z 701	C 6
45 321 00	Lampe Display kpl.	Lamp LCD	Z 702	
37 443 00	Trimmot 10 kOhm	Trimming poti 10 kOhm	RV 101-103	A 3
45 323 00	Tiptaste mit Achse	Push button	SK 01, 03, 06, 09	A 4
34 547 00	Tiptaste mit Winkel	Push button	SK 02, 04, 05, 07, 08	A 4
14 319 00	Netzschalter	Power switch	SW 801	B 6
45 324 00	Netztrafo	Power transformer	PT 801	C 7

Ersatzteilliste Gehäuseteile Spare parts list housing parts

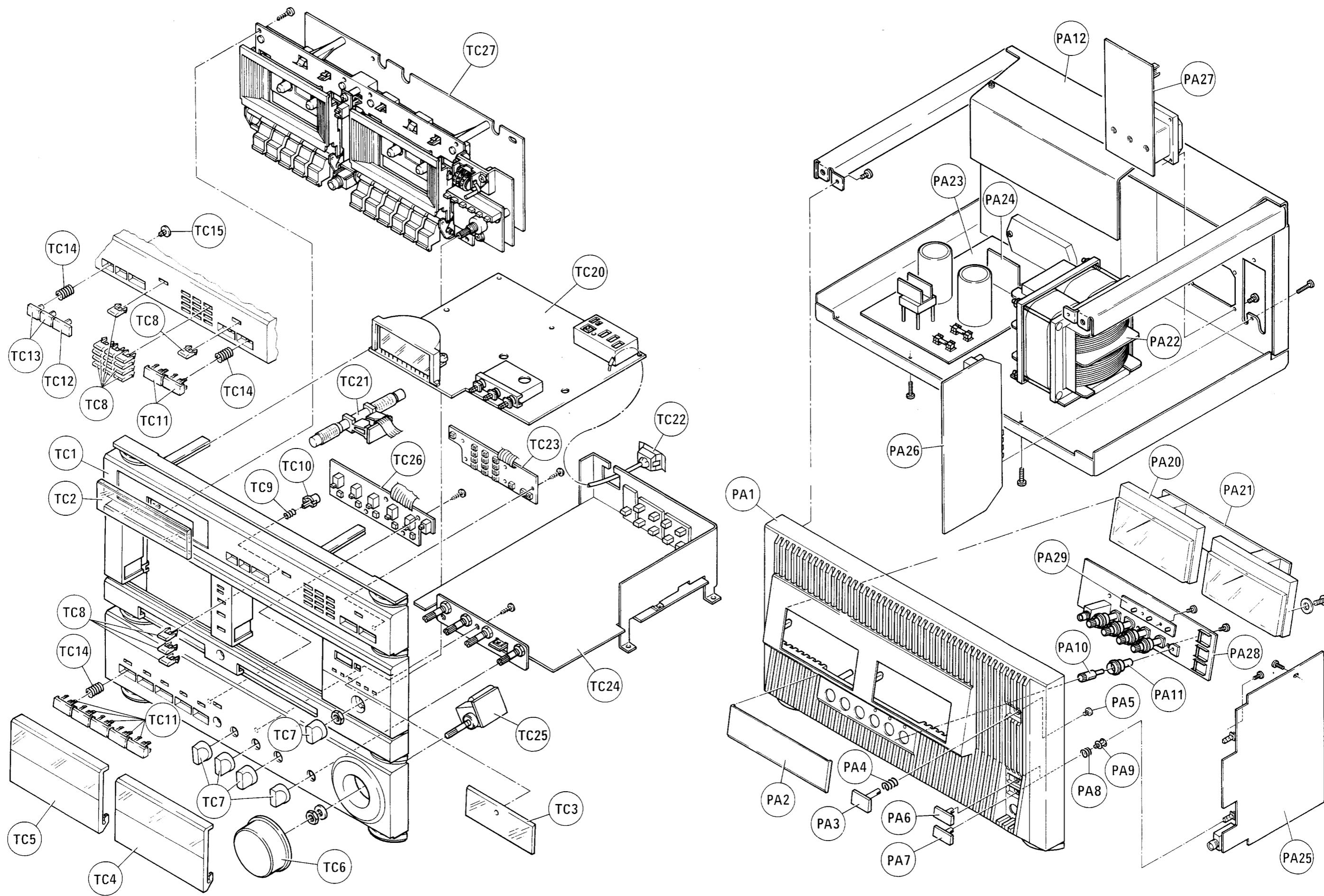
Bestell-Nr./Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
41 927 00	Frontteil RF + CA	Front panel RF + CA	TC 1	D 4
18 247 00	Blende bedruckt Tuner	Window tuner	TC 2	B 5
18 251 00	Blende bedruckt Cassette	Window cassette	TC 3	B 4
18 254 00	Cassettenfachdeckel Tape A	Cassette window Tape A	TC 4	B 5
18 257 00	Cassettenfachdeckel Tape B	Cassette window Tape B	TC 5	B 5
18 137 00	Alu-Drehknopf	Rotary knob volume	TC 6	B 9
18 141 00	Knebelknopf	Rotary knob tone control	TC 7	A 5
31 863 00	Tastenknopf 12 x 3	Push button	TC 8	A 1
18 197 00	Druckfeder für Kappe	Spring	TC 9	A 0
18 196 00	Kappe	Cap	TC 10	A 3
18 246 00	Tipp-Tastenknopf 24 x 10,5	Push button	TC 11	A 5
18 167 00	Tastenknopf 24 x 10,5	Push button	TC 12	A 4
18 166 00	Tastenknopf 16,5 x 10,5	Push button	TC 13	A 5
31 641 00	Druckfeder	Spring	TC 14	A 0
23 925 00	Stöpsel-Taste	Cap	TC 15	A 1
47 155 00	Cassettenrückwand bedruckt	Rear cover		B 6
18 442 00	NF-Bandltg. 1 x 0,5 250 mm 2 x Chinch	Cable Chinch 1 x	CD-RC	A 9
18 448 00	NF-Bandltg. 2 x 0,5 250 mm 2 x Chinch	Cable Chinch 2 x	PAOUT	B 3
47 110 00	Frontteil PA 1000 SUPER TEAM	Front panel PA 1000 SUPER TEAM	PA 1	D 2
47 340 00	Frontteil PA 1000 OPEN AIR	Front panel PA 1000 OPEN AIR	PA 1	D 2
18 386 00	Blende bedr. 1000 W PMP SUPER TEAM	Decoration cover SUPER TEAM	PA 2	A 8
18 436 00	Tastenknopf 24 x 15,5	Push button	PA 3	A 6
38 100 00	Druckfeder D=8 L=14,7	Spring button	PA 4	A 0
23 925 00	Stöpsel-Taste	Cap	PA 5	A 1
18 438 00	Tastenknopf 24 x 10,5 Speaker 1	Push button 24 x 10,5 Speaker 1	PA 6	A 5
18 439 00	Tastenknopf 24 x 10,5 Speaker 2	Push button 24 x 10,5 Speaker 2	PA 7	A 5
31 057 00	Druckfeder	Spring	PA 8	A 1
18 377 00	Stöpsel-Taste	Cap	PA 9	A 1
23 568 00	Knopf-Dreh	Rotary knob	PA 10	A 9
23 569 00	Steckachse	Rear panel	PA 11	A 7
18 734 00	Rückwand PA 1000 OPEN AIR	Rear panel PA 1000 OPEN AIR	PA 12	C 7
18 380 00	Rückwand PA 1000 SUPER TEAM	Rear panel PA 1000 SUPER TEAM	PA 12	C 7
38 410 00	Anzeigegerät (Power) PA 1000	Power instrument	PA 20	C 5

Explosionsdarstellung Gehäuse Casseiver

Exploded view housing casseiver

Explo-Index: TC

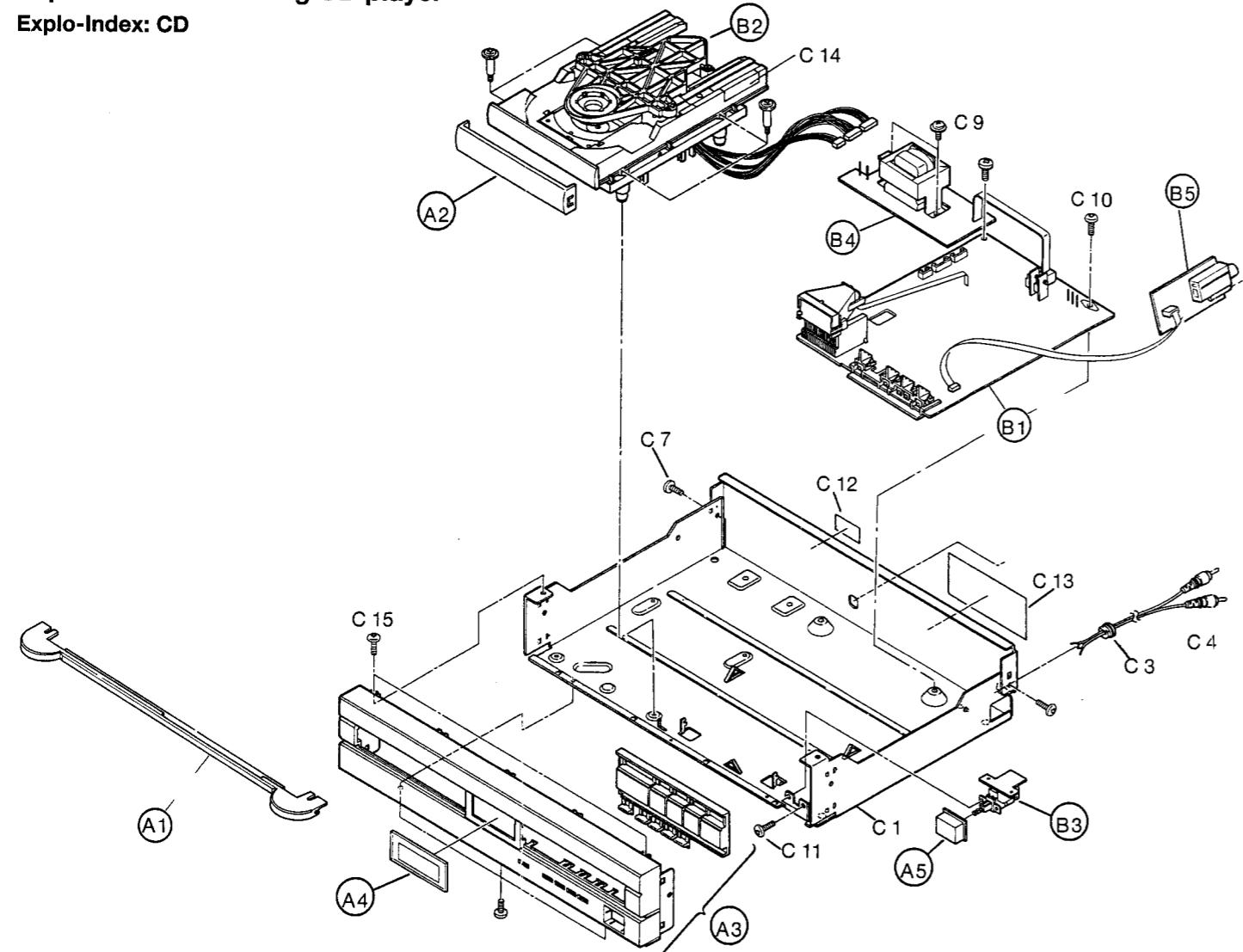
Explo-Index: PA



Explosionsdarstellung Gehäuse CD-Player

Exploded view housing CD player

Explo-Index: CD



Ersatzteilliste CD-Player Gehäuse/Mechanik

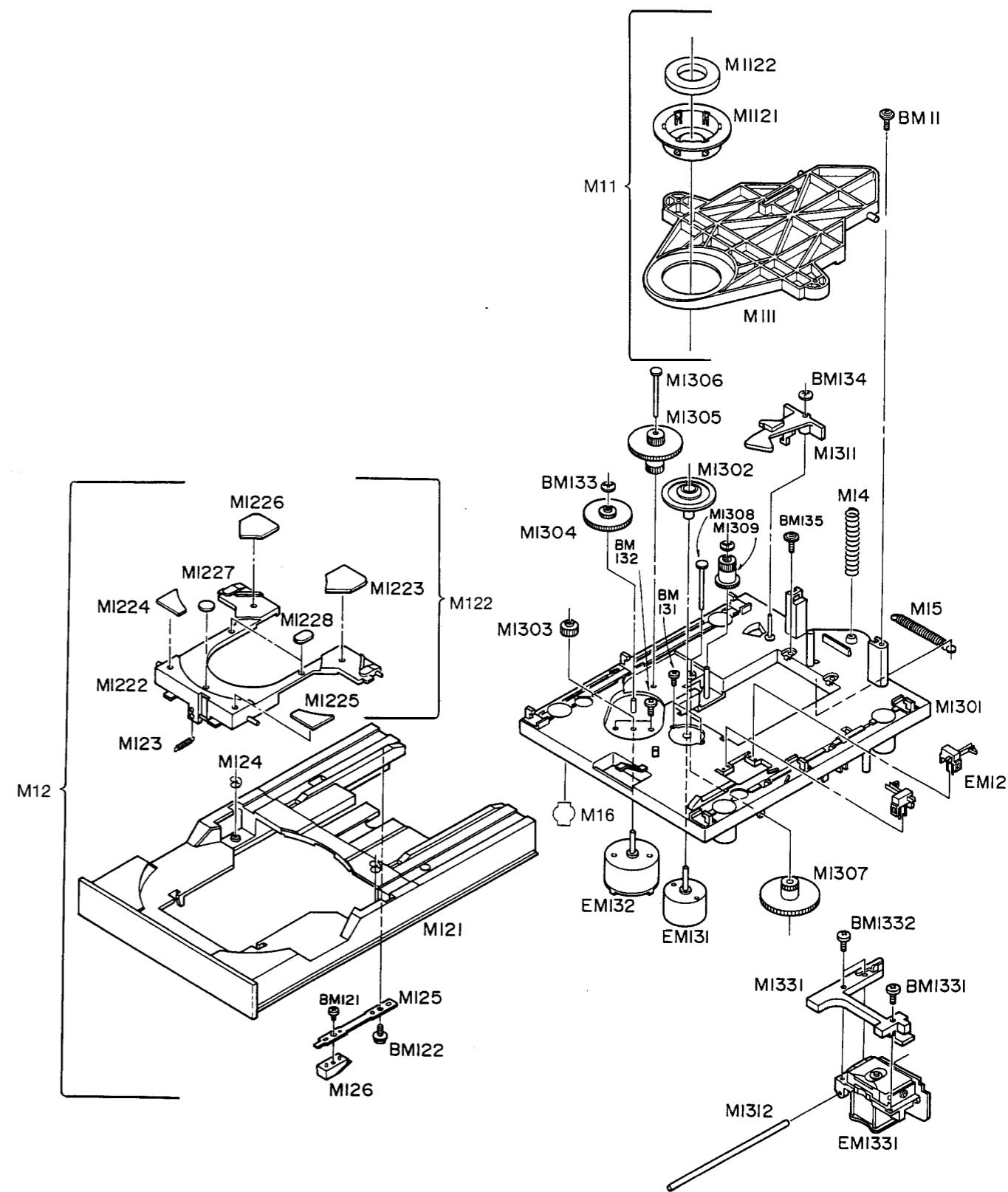
Spare parts list CD player housing/mechanism

Bestell-Nr./Part. No.	Bezeichnung	Description	Position	Preisgruppe/ Price key
18 385 00	Fußblende	Foot cover	A 1	B 5
48 065 00	Schlittenblende	Lid plate	A 2	B 5
48 064 00	Frontblende komplett	Front frame assembly	A 3	D 4
45 350 00	Anzeigeblende	LCD cover	A 4	B 5
45 347 00	Knopf Netzschalter	Knob power button	A 5	A 5
4591500	Mechanik kpl.	Mechanism assembly	B 2	G 6
45 916 00	Mikroschalter OPEN/END, INSIDE	Leaf switch OPEN/END, INSIDE	EM 12	A 5
45 917 00	Einspannarm kpl.	Chuck arm assembly	M 11	C 7
45 918 00	Schlitten CD-Platte kpl.	Loading box assembly	M 12	D 7
45 919 00	Single Adapter kpl.	Up down table assembly	M 122	C 6
08 325 00	Feder Schlitten A	Spring table A	M 123	A 1
18 197 00	Feder Schlitten B	Spring table B	M 124	A 0
45 920 00	Motor Disc	Motor spindle	EM 131	C 1
45 921 00	Motor Schlitten, Laser	Motor table, laser	EM 132	C 1
45 922 00	Antriebsteller	Disc table	M 1302	B 0
45 923 00	Motorpulley gezahnt	Motorpulley gear	M 1303	A 4
45 924 00	Zahnrad Schlitten, Laser A	Gear table, laser A	M 1304	A 5
45 925 00	Zahnrad Schlitten, Laser B	Gear table, laser B	M 1305	A 7
45 926 00	Zahnrad Schlitten, Laser C	Gear table, laser C	M 1307	A 4
45 927 00	Zahnrad Laser Zahnschiene	Gear PU rack	M 1309	A 4
45 928 00	Laserabtaster	Laser head	EM 133	F 3
45 929 00	Zahnschiene Lasertransport	PU rack	M 1331	A 6
45 930 00	Feder Einspannarm	Spring chuck arm	M 14	A 3
45 931 00	Feder Mechanik	Spring mechanism	M 15	A 3
45 932 00	Gummifuß Mechanik	Damper mechanism	M 16	A 2

Explosionsdarstellung Mechanik CD-Player

Exploded view mechanism CD player

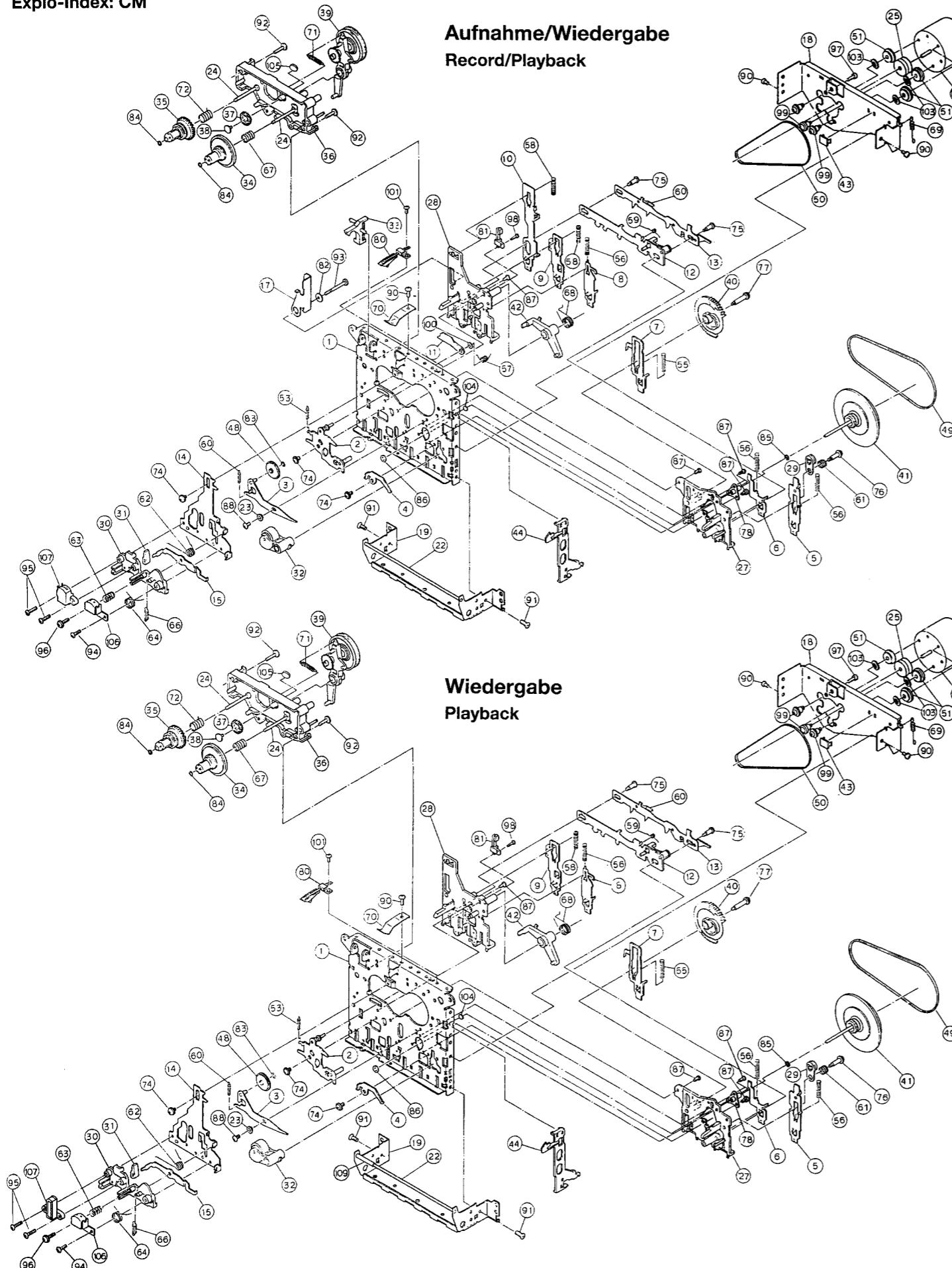
Explo-Index: CM



Explosionsdarstellung Mechanik Cassettenrecorder

Exploded view mechanism cassette recorder

Explo-Index: CM



Ersatzteilliste Mechanik Cassettenrecorder

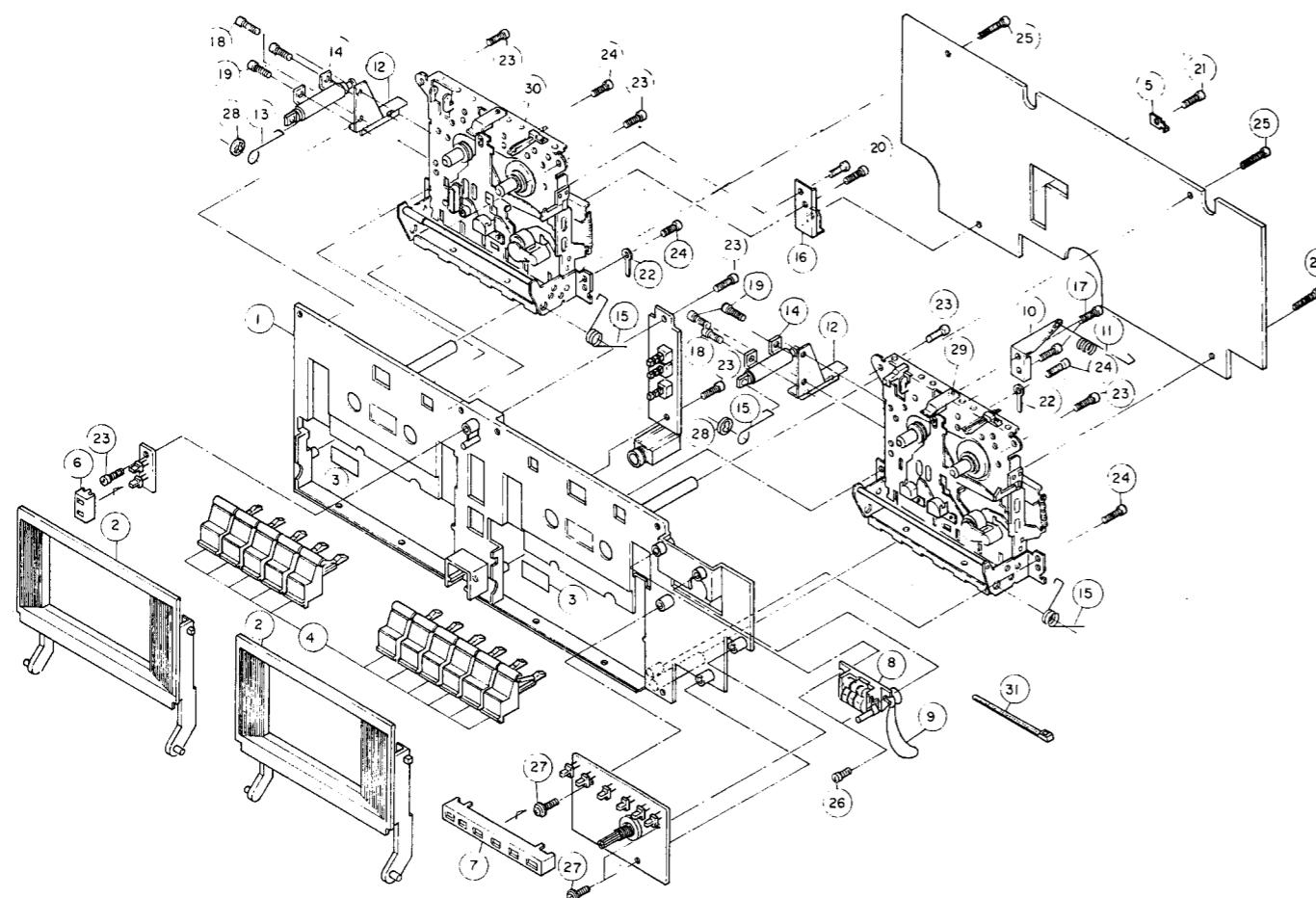
Spare parts list mechanism cassette recorder

Bestell-Nr./Part. No.	Bezeichnung	Description	Position	Preisgruppe/Price
34 059 00	Cassettenmechanik kpl. Aufn./Wiederg.	Cassette mechanism Rec./PB	LBNC 59 FB	E 1
34 060 00	Cassettenmechanik kpl. Wiedergabe	Cassette mechanism playback	LBNC 58 FB	E 0
26 841 00	Schalthebel	Shift arm	2	A 9
24 403 00	Zwischenradarm	Idler arm	3	A 4
24 404 00	Schalthebel Pause	Pause arm	4	A 3
34 043 00	Schalthebel Pause	Pause lever	5	A 3
34 044 00	Schalthebel Stop	Stop lever	6	A 2
34 045 00	Schalthebel Vorlauf	Forward lever	7	A 1
34 046 00	Schalthebel Rücklauf	Rewind lever	8	A 1
34 047 00	Schalthebel Play	Play lever	9	A 1
34 048 00	Schalthebel Record	Record lever	10	A 1
29 826 00	Auslöserasthebel (A)	Lock cam A	12	B 1
29 827 00	Auslöserasthebel (B)	Lock cam B	13	B 1
24 190 00	Abschalthebel	Auto stop arm	15	A 4
34 049 00	Motorpulley	Motor pulley	25	A 3
24 405 00	Pauserasthebel	Pause cam	29	A 1
24 406 00	Kopfrägerplatte	Head base	30	A 2
24 407 00	Stoppföhler	Sensor cap	31	A 1
26 724 00	Bandandruckrolle	Pinch roller arm	32	A 9
24 409 00	Aufnahmesperrehebel	Record sensor	33	A 2
24 410 00	Wickelteller rechts	Take up reel	34	A 8
24 411 00	Wickelteller links	Supply reel	35	A 5
24 413 00	Zahnrad Vorlauf	Forward gear	37	A 1
24 414 00	Nietbolzen Zahnrad Vorlauf	Bush forward gear	38	A 1
24 412 00	Rutschkupplung	Clutch arm	39	B 2
26 845 00	Zahnrad Start/Stop	Gear start/stop	40	A 3
34 050 00	Schwungmasse	Flywheel	41	B 3
26 728 00	Rasthebel	Lock arm	42	A 2
26 847 00	Schwungmasselager	Capstan spacer	43	B 5
24 420 00	Hebel Eject	Eject lever	44	A 2
24 423 00	Zwischenrad	Play idler	48	A 4
24 422 00	Antriebriemen B	Drive belt B	49	A 7
24 421 00	Antriebriemen A	Drive belt A	50	A 6
24 424 00	Gummipuffer Motor	Motor cushion	51	A 0
26 849 00	Feder Schalthebel	Spring shift arm	53	A 0
34 051 00	Feder Schalthebel Vorlauf	Spring forward lever	55	A 1
34 052 00	Feder Schalthebel Rewind	Spring rewind lever	56	A 1
24 427 00	Feder Schalthebel Record	Spring record lever	57	A 0
34 053 00	Feder Schalthebel Record	Spring record lever	58	A 1
26 851 00	Feder Auslöserasthebel A	Spring lock cam	59	A 0
26 852 00	Feder Auslöserasthebel B	Spring lock cam	60	A 1
26 853 00	Feder Pauserasthebel	Spring pause cam	61	A 1
24 428 00	Feder Kopfschlitten	Spring head chassis	62	A 1
24 429 00	Feder A/W-Kopf	Spring rec./playback head	63	A 0
26 854 00	Feder BA-Rolle	Spring pinch roller	64	A 1
24 432 00	Zugfeder Kopfschlitten	Spring head chassis return	66	A 0
45 277 00	Feder Wickelteller rechts	Spring take up reel	67	A 1
26 732 00	Feder Rasthebel	Spring lock arm	68	A 1
26 733 00	Feder Hebel Eject	Spring eject lever	69	A 0
24 436 00	Cassettenandruckfeder	Spring pack	70	A 1
34 054 00	Feder Rutschkupplung	Spring clutch arm	71	A 1
34 055 00	Feder Wickelteller links	Spring supply reel	72	A 1
29 703 00	Schaltkontakt Bandsorte	Leaf switch tape select	80 SW 2, 3	A 6
24 440 00	Schaltkontakt Motor	Leaf switch motor	81	A 4
26 734 00	Schaltkontakt play Tape 1	Leaf switch play tape 1	112	A 6
24 441 00	Scheibe Wickelteller	Washer reel	84	A 0
37 778 00	A/W-Kopf	Rec./PB head	106	C 2
37 779 00	Wiedergabekopf	Playback head	106	B 9
24 513 00	Löschkopf	Erase head	107	B 9
29 831 00	Bandführung	Tape guide	107	A 4
37 780 00	Motor	Motor	108	C 5

Explosionsdarstellung Cassettenrecorder

Exploded view cassette recorder

Explo-Index: CA



Ersatzteilliste Cassettenrecorder

Spare parts list cassette recorder

Bestell-Nr./Part. No.	Bezeichnung	Description	Position	Preisgruppe/Price
34 035 00	Cassettenfach	Cassette case	C 2	A 7
45 276 00	Knopftaste Klavier	Cassette button	C 4	A 3
34 038 00	Zählwerk	Counter	C 8	B 3
34 039 00	Zählwerkriemen	Counter belt	C 9	A 2
34 040 00	Feder A/W-Schalter	Spring Rec./PB switch	C 11	A 1
34 041 00	Feder Fachdämpfung	Spring damper	C 13	A 1
29 003 00	Fachdämpfung	Damper	C 14	A 5
34 042 00	Feder Cassettenfach Eject	Spring cassette eject	C 15	A 1
34 059 00	Cassettenmechanik Aufn./Wiederg.	Cassette mechanism Rec./PB	C 29	E 1
34 060 00	Cassettenmechanik Wiedergabe	Cassette mechanism Playback	C 30	E 0

Technische Änderungen vorbehalten.
Technical modifications reserved.